ATTRACTIVE SMALL HOMES OF CONCRETE MASONRY

Being a series of plans and home studies prepared through cooperation with the Architects Small House Service Bureau in the interest of promoting better design and construction for the small home. Informative data illustrating the use of concrete and concrete masonry materials as applied to modern fireproof residence construction are also included.

Concrete for Permanence

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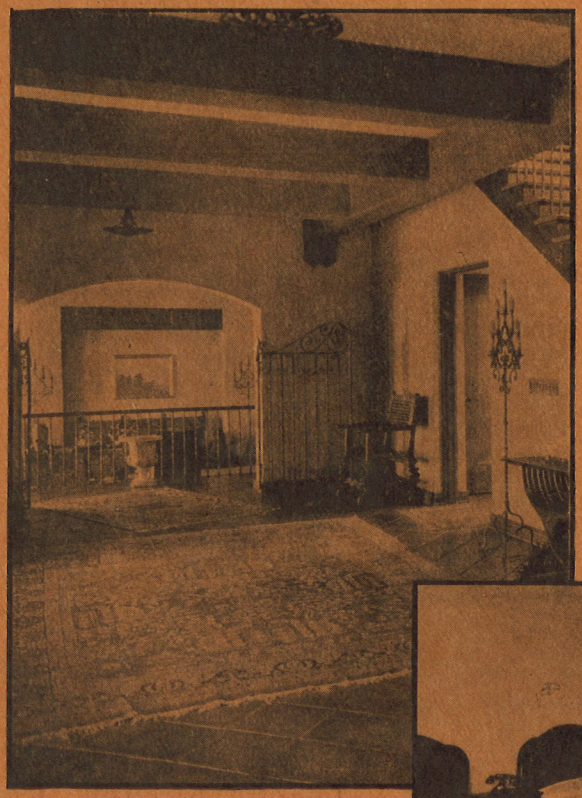
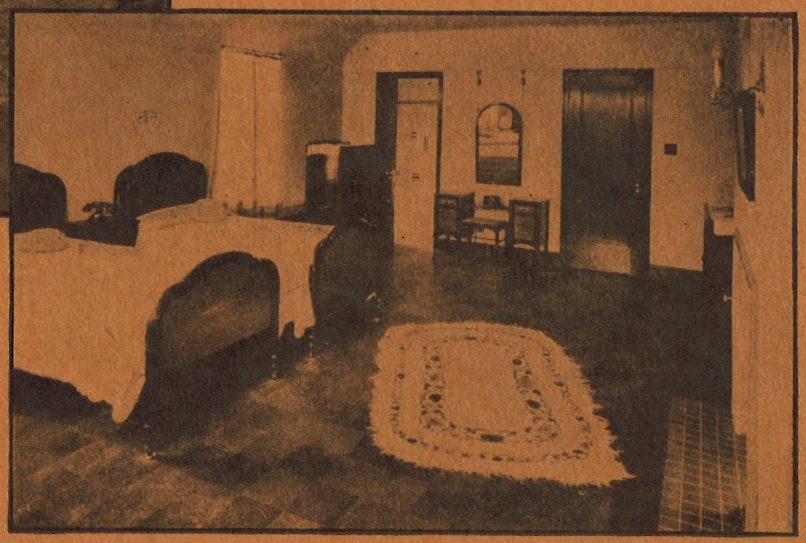
The Selling Value

The concrete floor protects the furnishings of this living room from damage by basement fires.

A wax-polished concrete floor needs no covering—other than rugs—and is very easily kept spotlessly clean.





In this bedroom, the concrete floor is overlaid with cork floor tile. There will never be any creaking floor here!

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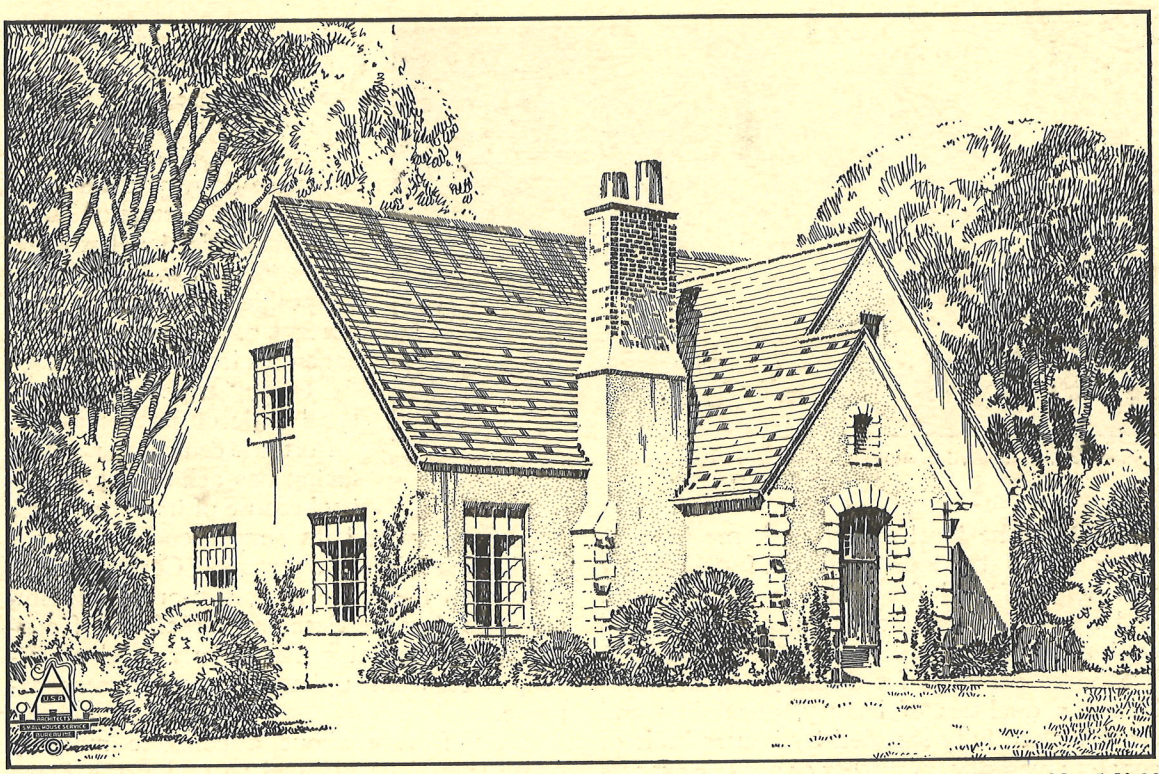
CONCRETE FOR PERMANENCE

Attractive Small Homes of Concrete Masonry—1



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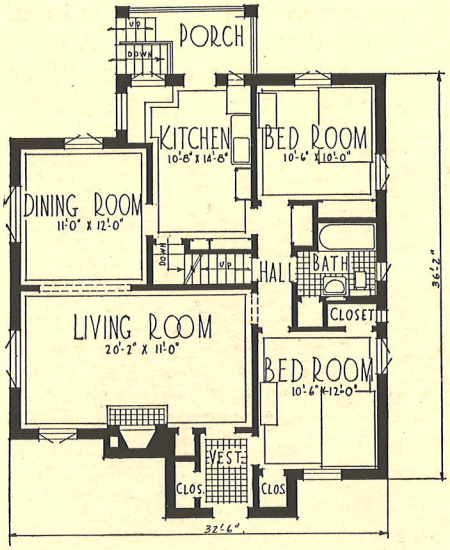
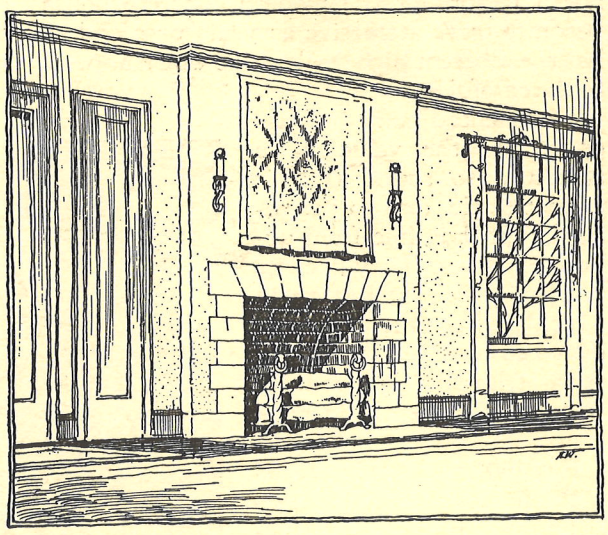
Design No. 5-K-20





EVERY essential requirement of the family desiring a small home is generously satisfied in this compact and well proportioned five room house. In appearance it is a distinct and interesting departure from the ordinary bungalow.

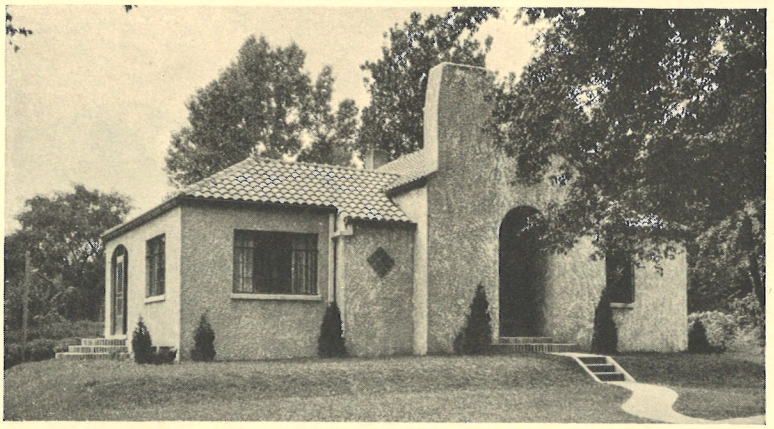
The living room, dining room and kitchen are so arranged that the utmost of convenience is obtained. The bedroom and bath are separated from the rest of the house and connect with each other by a hall. There is excellent closet space throughout. Two full bedrooms, plenty of storage space and an additional bathroom can be arranged in the attic if desired.

Construction: Exterior walls of concrete masonry, portland cement stucco exterior finish, field stone trim, brick chimney stack, roof of cement asbestos shingles, first floor of concrete. *Facing:* East or south. *Size of lot:* 40 feet would suffice in most cases; 50 feet would be required if the driveway is built at the side.

This is one of a series of plans and home building studies prepared through cooperation with the Architects Small House Service Bureau to promote better design and construction in the small home. Complete working drawings and specifications for the house shown above may be secured at moderate cost from the Architects Small House Service Bureau at 7 West Madison Street, Chicago.

A. I. A. File 10 a 2

THE CONCRETE MASONRY HOME



Firesafety, economy, durability and permanent beauty are outstanding features of the concrete masonry home.

TODAY the ideal American home is characterized by individuality of design, by weatherproof and fire resistive construction, and by convenient interior arrangement and equipment.

Modern demands for dwellings which combine the qualities of beauty, durability and economy are fully satisfied by houses built of concrete masonry. Whether or not one expects to occupy the same house for a long period is not a factor, for the modern concrete house becomes more attractive as years pass and so has the inherent high resale value which appeals to the careful buyer.

Experienced home builders appreciate the value of a structure so sound that it cannot settle, and so permanent that it is free from upkeep expenses. They likewise appreciate construction in which plaster cracking is reduced to a minimum and interior trim and cabinet work remain permanently in position.

Fire hazards have increased with the congestion in modern cities. Firesafe construction therefore becomes vital.

In the home, sheltering the family and its valued and cherished possessions, reasonable protection against fire is today a logical necessity. Concrete construction provides that protection with little or no additional expense.

Economical and thoroughly adaptable for use in every important part of the structure, concrete also lends itself readily to any type of architectural style or interpretation.

Portland cement stucco surfacing has achieved popularity because of its permanence and economy and its almost endless variety of pleasing colors and textures. Concrete steps and porch floors are firm, slip-proof and immune to decay. Permanent roofings of concrete are attractive, fire-resistive and practically free from upkeep or replacement expense.

Every feature about a concrete masonry house should be planned to make it a home of permanent beauty. After years of occupancy such a structure will be as sound and as beautiful as the day it was built. A more substantially constructed house cannot be bought at any price.

The combination of concrete masonry and portland cement stucco permits the development of any architectural treatment.

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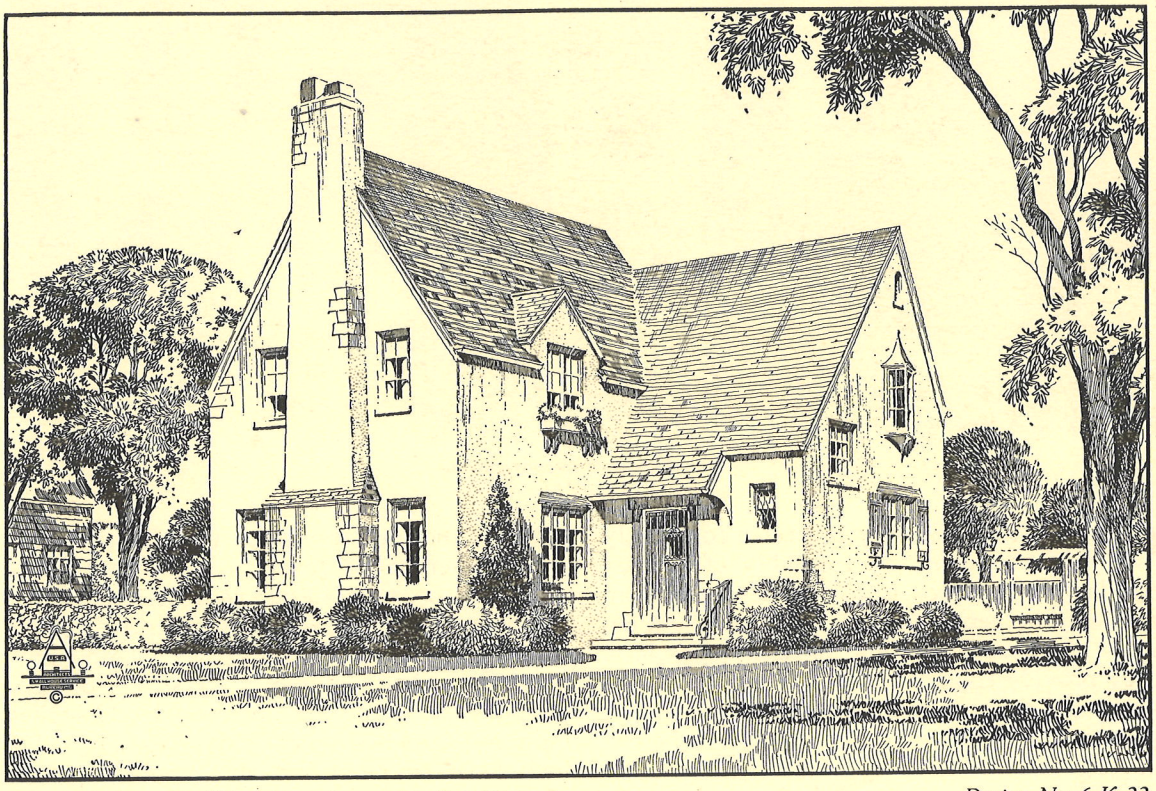

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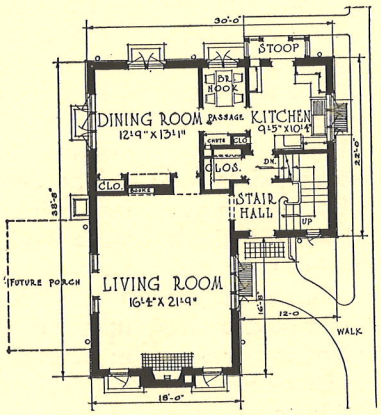
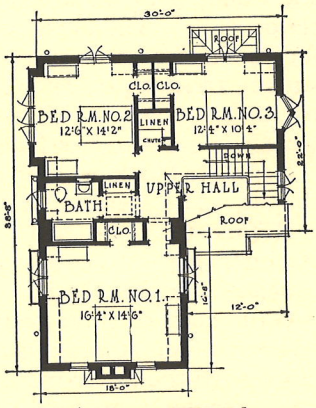
Design No. 6-K-22



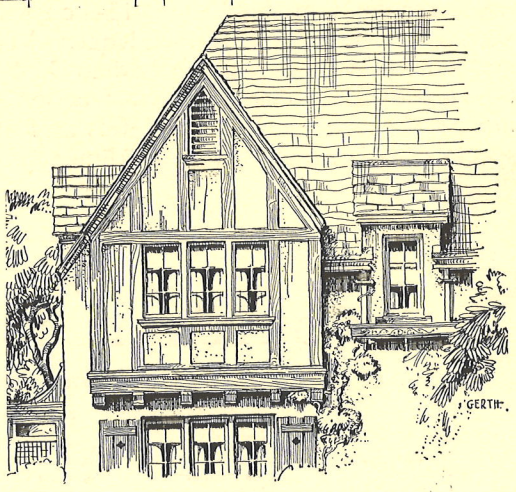


THIS English style home abounds in beauty and charm. Interest and variety characterize the exterior treatment, from the lines of the roof, broken by attractive dormers and extending down over the entrance, to the gable ends, enhanced by well designed windows.

The construction is of concrete masonry throughout with consequent deep reveals at the windows. Exposed block at the corners and in the chimney add a pleasing touch of informality. At one side of the entrance is a decorative wrought iron balustrade. The door itself is of heavy matched wood planks broken by grilles of wrought iron.

The detail features a rear portion of the side elevation showing the treatment of the dining room windows and those of the bedroom above, as well as the dormer window which lights the bathroom.

Construction: Concrete masonry, exterior of portland cement stucco, cement asbestos shingle roof, casement windows, first floor of reinforced concrete. *Size of lot:* 40 feet; 50 feet if porch is desired. *Facing:* South or east.



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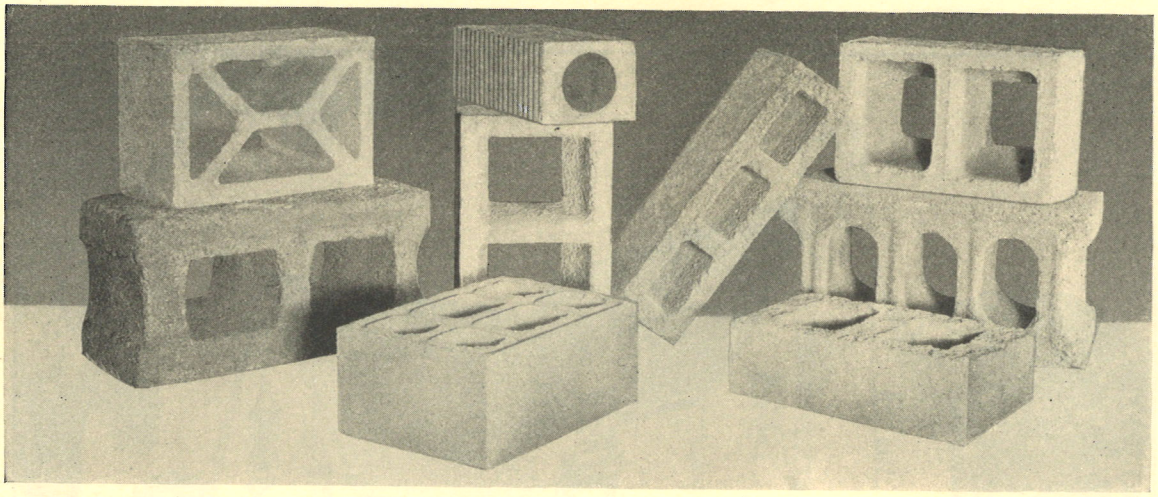
CHARACTERISTICS OF CONCRETE MASONRY



Typical concrete masonry units.

CONCRETE masonry is a term commonly used to denote an assembly of precast building units (block, tile or brick) made from portland cement concrete. These building units have gained a wide popularity because they provide the advantages of masonry construction, are easy to handle and quick to lay, yet retaining all the sterling qualities inherent in concrete.

Concrete masonry is regularly employed in the building of all kinds of exterior and interior walls. The units provide a sturdy base for portland cement stucco or other attractive surface treatments, or they may be used as a backing for precast or natural stone, brick, terra cotta and other facings.

Concrete block are made in several sizes and shapes. The standard 8 by 8 by 16-inch size is the most widely used. Laid up in a single thickness it produces a wall 8 inches thick and courses 8 inches high. The 8-inch height is equivalent to three courses of brick, a size relation which is found convenient in bonding block with the latter material. Block are also made regularly in the 10 and 12-inch widths with 8-inch height and 16-inch length. Veneer and partition block can be had in 3, 4 and 6-inch widths. To facilitate construction, corner block, joist block, sills, lintels and other specials are generally made in dimensions to fit with those of the block used in the wall.

The average air space in a concrete block amounts to about 40 per cent of its volume.

Concrete building tile are smaller and lighter in weight than concrete block. A larger proportion of their volume is air space, usually about 50 per cent. Tile are usually 12 inches long and 8 inches wide. Either 8-inch or 12-inch walls can be built with a single thickness of tile, depending on the way they are placed in the wall. Heights of different types of tile vary, units 3½ inches and others 5 inches in height being in common use. One course of 5 by 8 by 12-inch tile is equal in height to two courses of brick; one unit is equivalent in volume to six common brick.

The demand for concrete masonry units is increasing in every building center. City and state building ordinances recognize the advantages inherent in these fire-resistive units. The nationally known Building Code Committee of the U. S. Department of Commerce, in preparing building standards for safe, economical wall construction, recognized the merits of concrete masonry in its recommended building code which is being widely used as a guide to good construction.

Further information on concrete masonry construction will gladly be furnished by the Portland Cement Association upon request.

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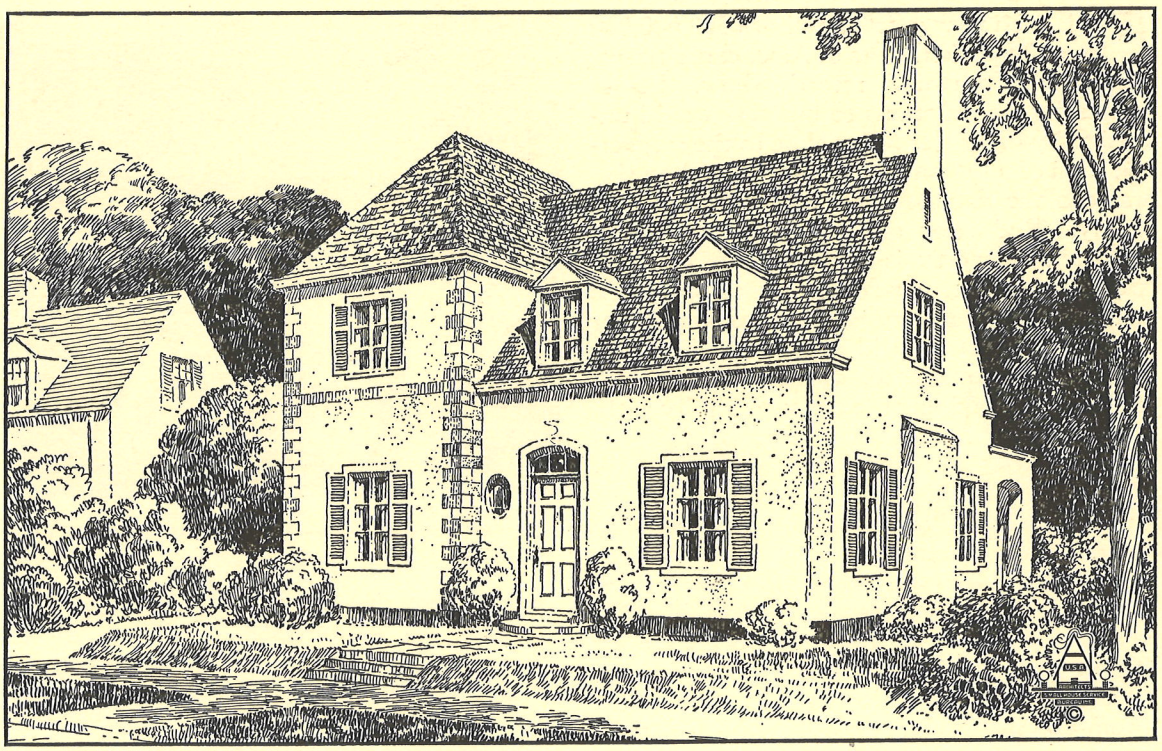

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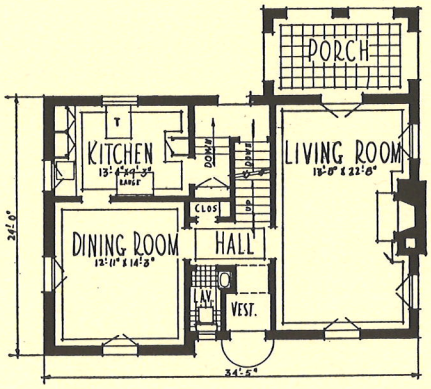
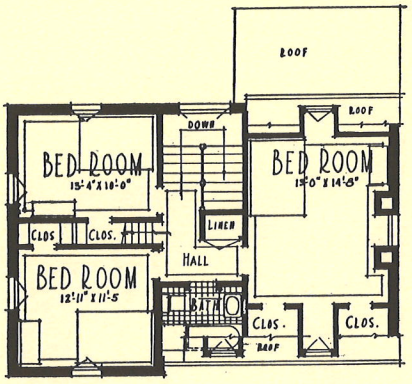


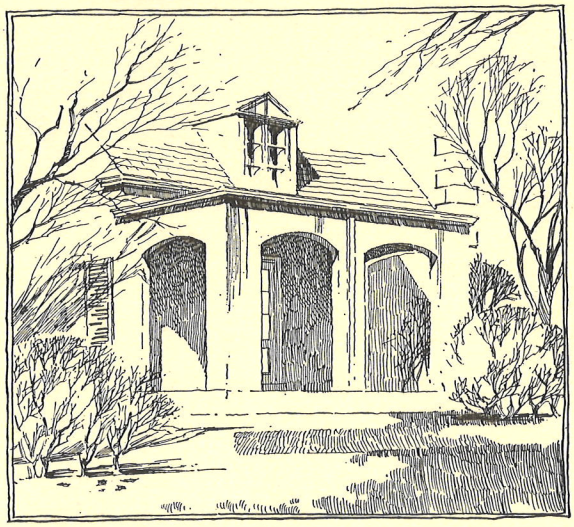


COMPACTNESS and convenience are combined with simplicity and beauty in this well designed six room house.

The exterior treatment has a number of interesting details, such as the exposed masonry quoins at the corners of the two story wing, the cast concrete trim framing the recessed doorway and the pleasing roof line broken by dormer windows. This house will fit well and look dignified in any location.

The porch with portland cement plaster arches as shown in the detail opens off of the living room through French doors.

Construction: Concrete masonry, exterior finish portland cement stucco, concrete tile roof, concrete first floor. *Lot Size:* 50 feet desirable. *Facing:* North or west.



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A. I. A. File 10 a 2

CONCRETE MASONRY AND FIRESAFETY

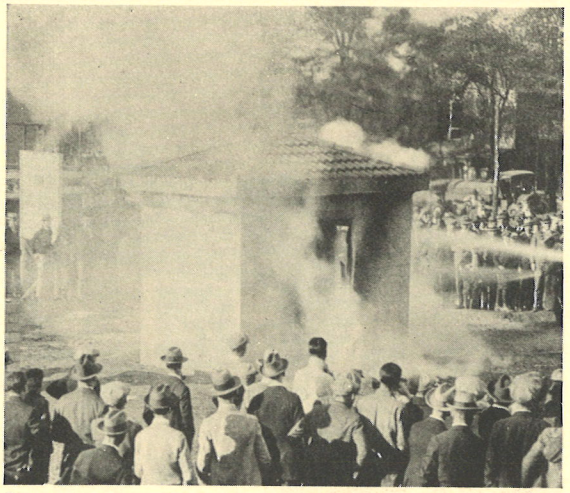
FIRE each year exacts a toll of $500,000,000 from the pocketbooks of American citizens, insurance companies' records show. Losses caused by interruptions to business would undoubtedly bring this figure close to the staggering total of a billion dollars. Greater than this waste is the immeasurable loss of 14,000 lives yearly. Reduction of these losses in human lives and property is a national problem of greatest moment. One of the principal reasons why concrete masonry has become so popular in the construction field is because of its firesafety and permanence. That concrete block and concrete building tile can successfully withstand intense heat has been conclusively proved in official tests as well as in actual fires.

Concrete masonry is the only hollow masonry that has received official rating as a standard fire retardant material. Of interest in this connection is the following extract from the Underwriters' Laboratory Retardant Report No. 1555 giving the results of fire exposure tests upon hollow concrete masonry units: "Walls composed of these units do not add fuel to fire. From the fire protection point of view, their use is to be preferred over walls of combustible material or of non-combustible material the strength of which is seriously affected by fire temperatures."

The fire resistant qualities of concrete masonry have further been emphasized by practical demonstrations in many sections of the country. At Birmingham, Alabama, for instance, fire in a demonstration house burned for fifty minutes, after which water under pressure was applied to the interior walls, they being then in a white hot condition. The State Fire Marshal of Alabama who attended the demonstration reported:

"On inspection of the building, no cracks of any nature were found, nor was any disintegration or crumbling of the tile apparent. The ceiling was undamaged and the concrete tile roof showed no evidence of having been affected. These units plainly demonstrated their fire resisting qualities and are to be highly recommended for use in the construction of permanent, fireproof structures."

Similar demonstrations and tests in other sections of the country have shown identical results and have developed widespread confidence in the value of concrete masonry for all types of firesafe construction, both residential and commercial. In small homes as well as elaborate estates, in garages, office buildings, apartments, churches and hospitals, concrete masonry units cannot burn because the materials of which they are made are non-burnable. Concrete construction throughout is a guarantee of maximum fire protection.



Fire raged in this Birmingham, Ala., test house for 50 minutes. Water under pressure was applied to the walls while white hot.

Sections of the walls were broken into for inspection after the fire and not one tile was found damaged in any way.

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Attractive Small Homes of Concrete Masonry—4

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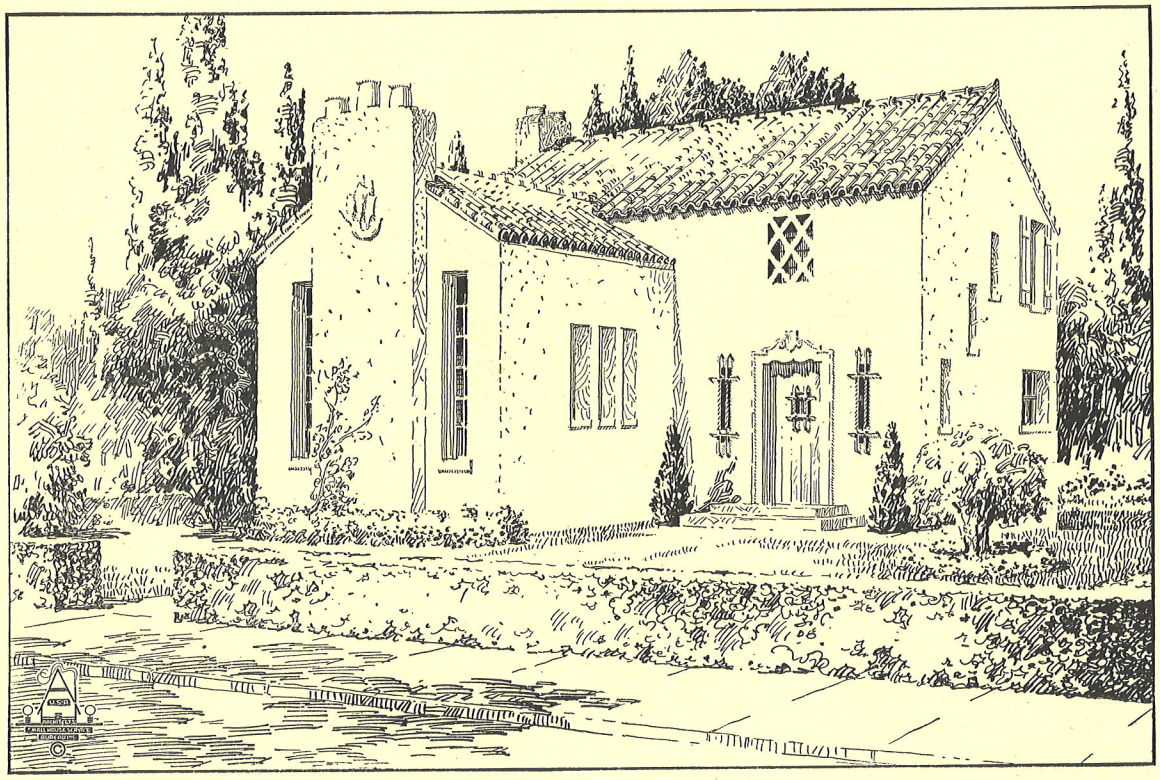

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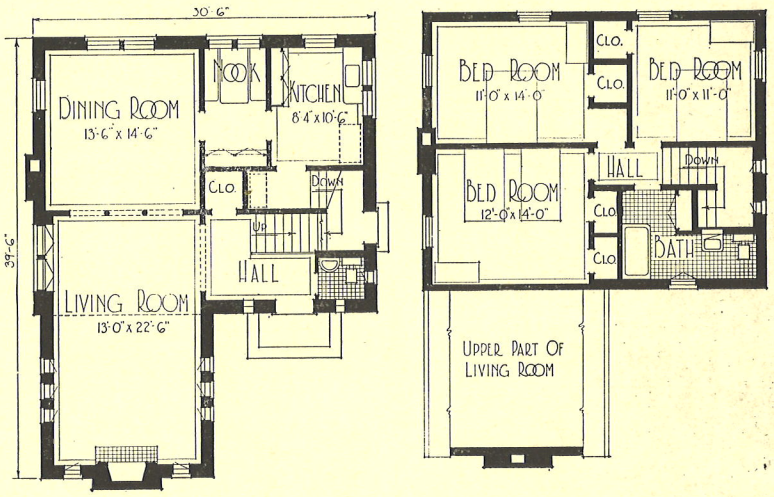
Design No. 6-K-16



THE thick solid walls and deep window openings from which the Spanish home gets much of its character are well done in this charming bungalow. It is concrete throughout —the walls, the floor and even the roof. To the rigorous simplicity of the walls have been added just the right balance of interesting detail, such as the molded cement stone work about the doorway, the grilled windows at the sides, the cross bars of masonry screening the bathroom window above the entrance, and the molded ornament on the chimney stack. With the colorful tile roof and warm cream-colored stucco walls pleasingly textured, the whole effect may be made extremely artistic.

A portion of the living room is two-story, giving it unusual character. The dining room and living room are separated by a gracefully designed arcade of precast concrete columns. To the right through a plastered archway, a view is obtained of the stairway where a wrought iron hand rail and balusters give additional ornamentation. It is interesting to note how little of this house has been given over to hallways.

Construction: Concrete masonry, exterior finish portland cement stucco, first floor of reinforced concrete, roof of concrete tile. *Size of lot:* Approximately 40 feet; if desired to include a drive, 45 feet will be required. *Facing:* North or east.

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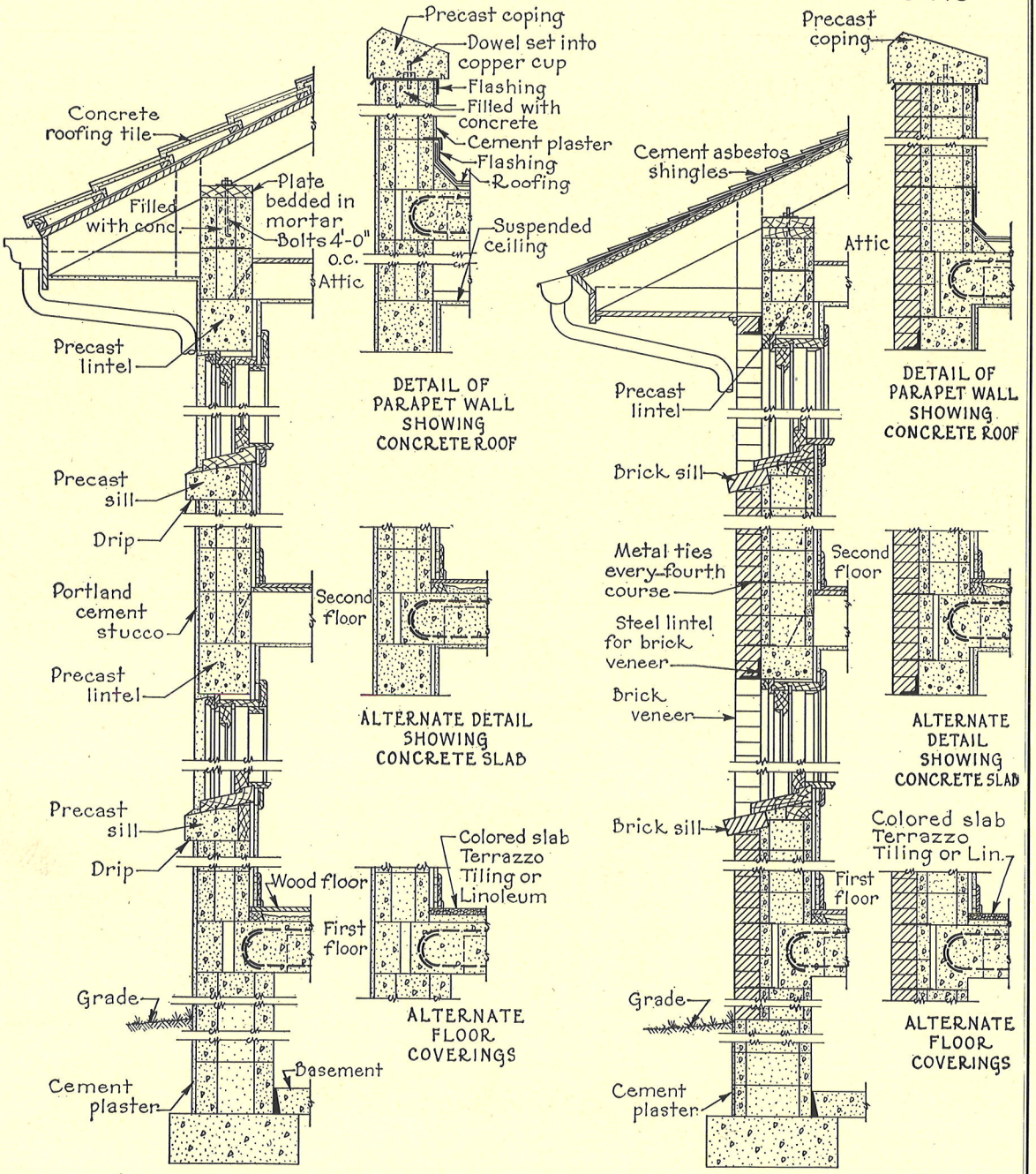
A. I. A. File 10 a 2

TYPICAL CONCRETE MASONRY WALL SECTIONS



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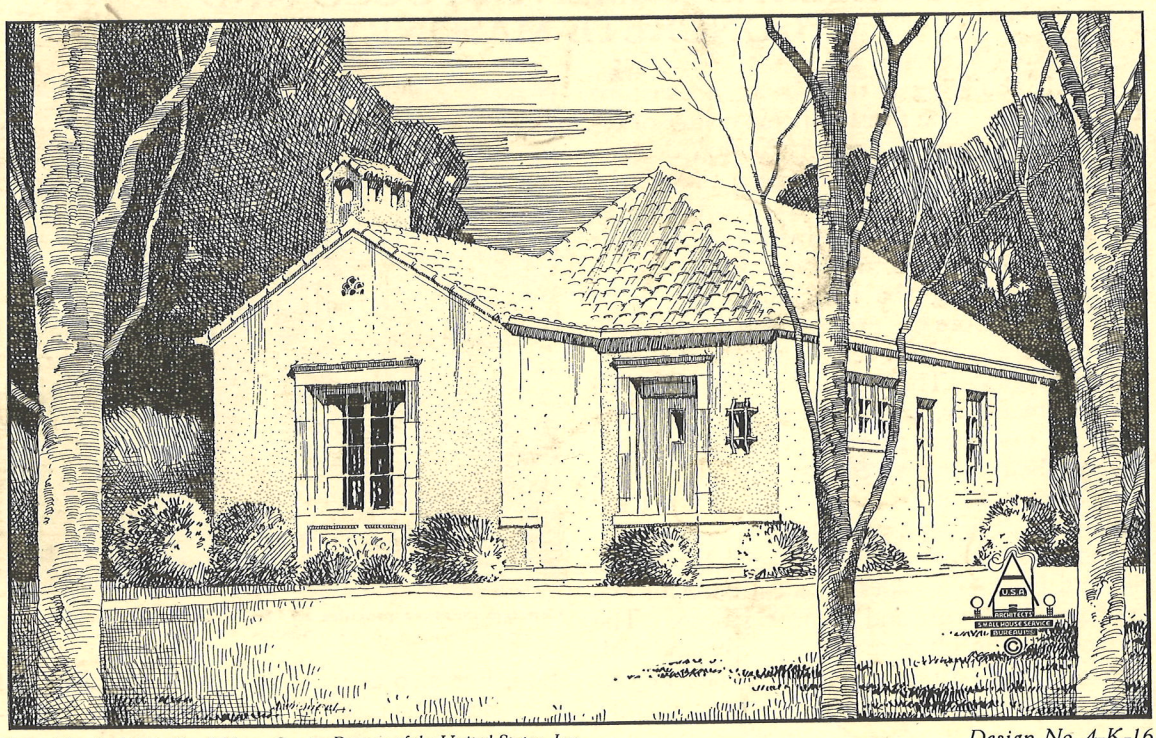
Attractive Small Homes of Concrete Masonry—5



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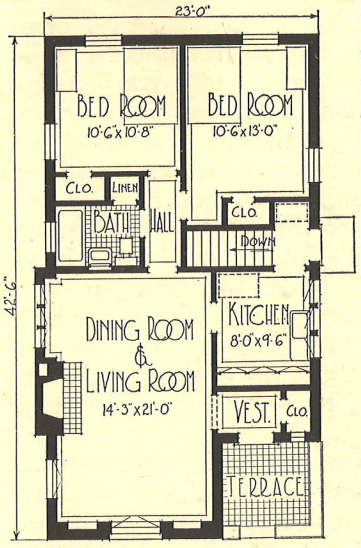

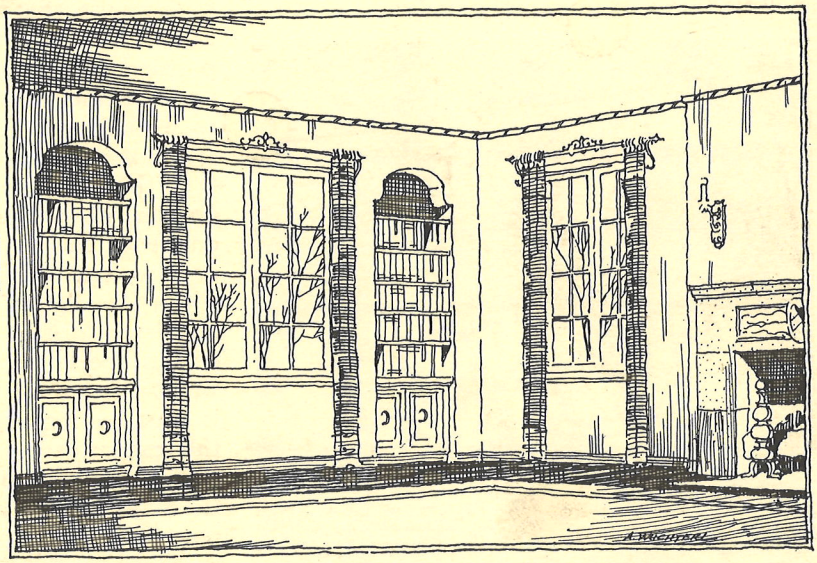

THE interior arrangement of this plain, substantial looking, four-room structure is an interesting departure from the usual bungalow plan. Ample accommodations are furnished for all home requirements with no sacrifice of comfort or convenience. No dining room is included in the plan. A table at one end of the living room serves the double purpose of a library table and a place to dine. The detail shows a portion of the spacious living room—looking toward the front. The two bedrooms are large and have plenty of closet space. They open off of a hall, as does the bathroom, providing privacy for this part of the house.

The exterior is well proportioned, making use of inexpensive material to secure unusually fine results. The cast stone trimmed doorway and triple casement windows, the tiled roof, the ornamental chimney top, the cast stone ornament below the front of the window—all help to give the picturesque and romantic quality desired by home owners.

Construction: Concrete masonry, portland cement stucco, concrete tile roof, concrete first floor. *Facing:* East or south. *Lot size:* Minimum 30 feet.

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A. I. A. File 10 a 2

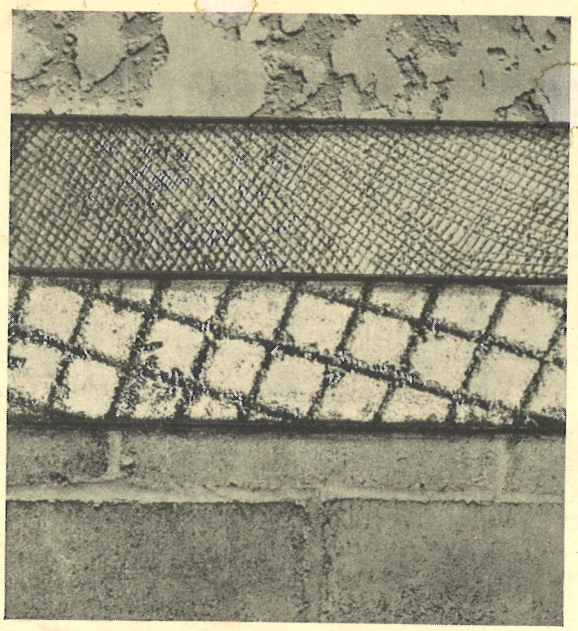
PORTLAND CEMENT STUCCO AND CONCRETE MASONRY

HOME building is undergoing a constant change. The average home owner of today is not content with construction deemed adequate years ago. He has been taught the advantages of fire-safety in construction, permanence and economy of materials and the desirability of architectural beauty.

Notable among the materials which have come to the fore in present day home construction are portland cement stucco and concrete masonry. These materials have proved their permanence, tests have shown their fire-resistive qualities, construction has demonstrated their economy of first cost and maintenance and countless homes have shown their vast range of artistic possibilities.

Concrete masonry—that is concrete block, tile and brick—provides an ideal base for the application of portland cement stucco. The surfaces of the units are sufficiently and uniformly rough to produce an excellent key or mechanical bond, while their uniform density permits development of that proper degree of wall suction which not only facilitates application, but also assures maximum adhesion and minimizes the possibility of blotching or irregular behavior of color. So closely do these materials unite, that wall and stucco are practically monolithic. Being of almost identical composition they react to external conditions in the same manner—contraction and expansion due to weather conditions are uniform, preventing cracking or breaking of the stucco coat.

Concrete masonry provides an ideal base for portland cement stucco.



Three coat work is recommended in applying stucco to concrete masonry.

In the application of portland cement stucco on concrete masonry walls, good practice recommends the use of three coats—the scratch or base coat which forms the mechanical bond with the wall, the "brown" coat which smooths out irregularities and the finish coat which carries the color and texture chosen for the walls. The total thickness of the three coats is usually from 7/8 to 1 inch depending upon the texture used.

The application of portland cement stucco is readily done by the average plasterer with reasonable assurance of a good job. Literature prepared by the Portland Cement Association describes in detail the recommended methods of applying stucco to various bases and illustrates how a number of popular textures are developed. Copies will be sent on request.

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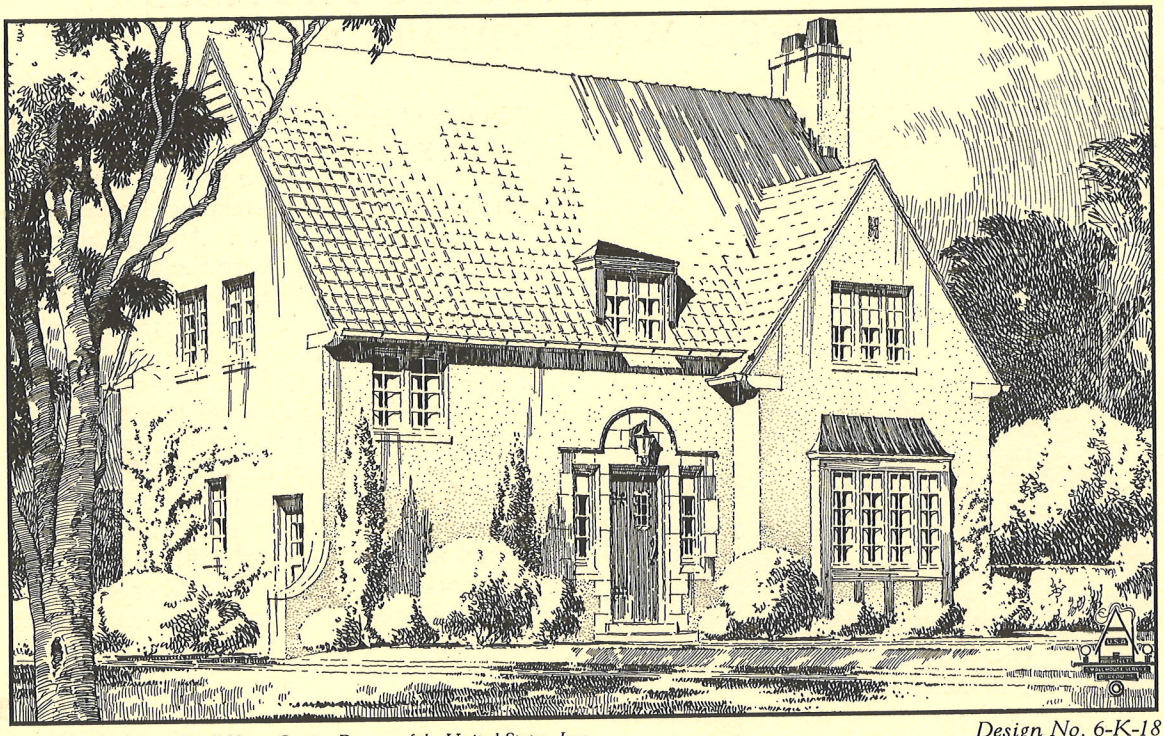
Attractive Small Homes of Concrete Masonry—6



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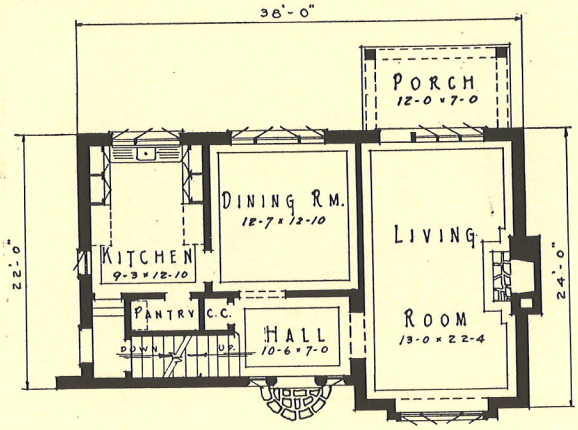
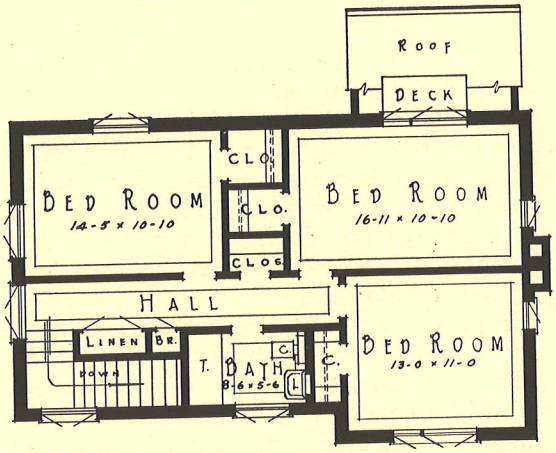
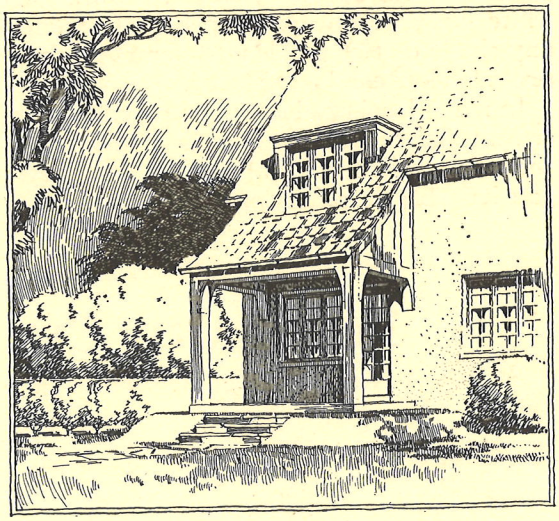




DISTINCTION shows in every line and feature of this house of English origin. The entrance is simple yet picturesque. From the low sweep of the wall at one side, which screens the service entrance, to the gable end at the other with its attractive group of casement windows, the facade presents a truly handsome appearance

The rectangular plan affords six large, pleasant rooms in addition to an attractive reception hall, which adds a touch of formality.

Construction: Concrete masonry, exterior finish of portland cement stucco, roof of concrete tile, casement windows, concrete first floor. *Facing:* North or west. *Size of lot:* Approximately 50 feet.



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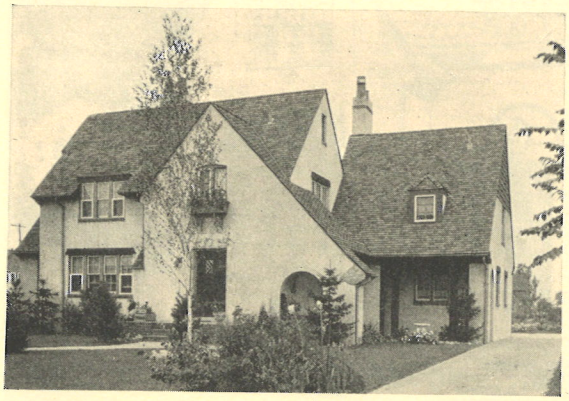
A. I. A. File 10 a 2

PORTLAND CEMENT STUCCO PROVIDES ARTISTIC WALL TREATMENT

JUST as color and texture are important considerations in the painting of a picture, so are these qualities essential in obtaining pleasing appearance in the exterior wall treatment of a home. They must be selected to harmonize with the architectural style of the house as



Color and textural effects may be secured with portland cement stucco to harmonize with any architectural treatment.

well as with the trees, shrubs, vines and other elements of the setting.

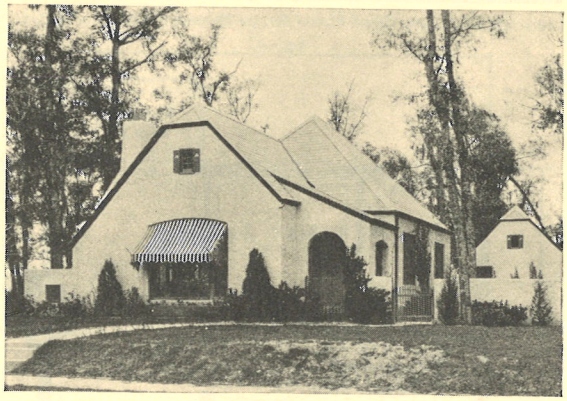
The growing realization of the importance of color and texture in the wall treatment of the well-designed home has gained for portland cement stucco a prominent place in the residence construction field. This material offers almost unlimited possibilities for artistic expression in color and texture and at the same time provides a surfacing which is durable, fireproof and permanently beautiful.

There is perhaps no wall surfacing material with which color may be better used than with stucco. Pink, buff, tan, cream, brown, gray, white, ivory, yellow, red, copper—in fact almost any shade or tint or blended combinations of several colors can be produced.

In many localities factory-prepared portland cement finish coat material is available. In these the cement, mineral pigments and aggregate have been carefully proportioned and thoroughly mixed insuring a material of uniformly high quality and permanent color.

Stucco is also rich in the variety of textures which may be produced—textures limited only by the skill of the plasterer. Among the more popular ones in wide use are the Spanish with its wavy, trowel-marked finish; the Mexican with its smooth, irregular surface; the troweled, stipple finish of the Italian texture; the Colonial with its even, sand-floated surface; and the Modern American with its soft tapestry finish.

The textures are in the main produced by variation in the manipulation of the trowel or other tools of the craft when applying the finish coat. Some very artistic finishes, however, are produced without tools other than the hands of the workman encased in rubber gloves or sheepskin mittens. Whatever the method used there remains revealed the handiwork of the craftsman, accentuating the beauty of the tex-



Portland cement stucco provides a firesafe and durable wall finish which grows stronger and more beautiful with age.

ture as do the brush marks on the surface of an oil painting.

Several of the more popular textures and methods of application are described in literature prepared by the Portland Cement Association. Booklets will gladly be sent upon request to any of the district offices listed below.

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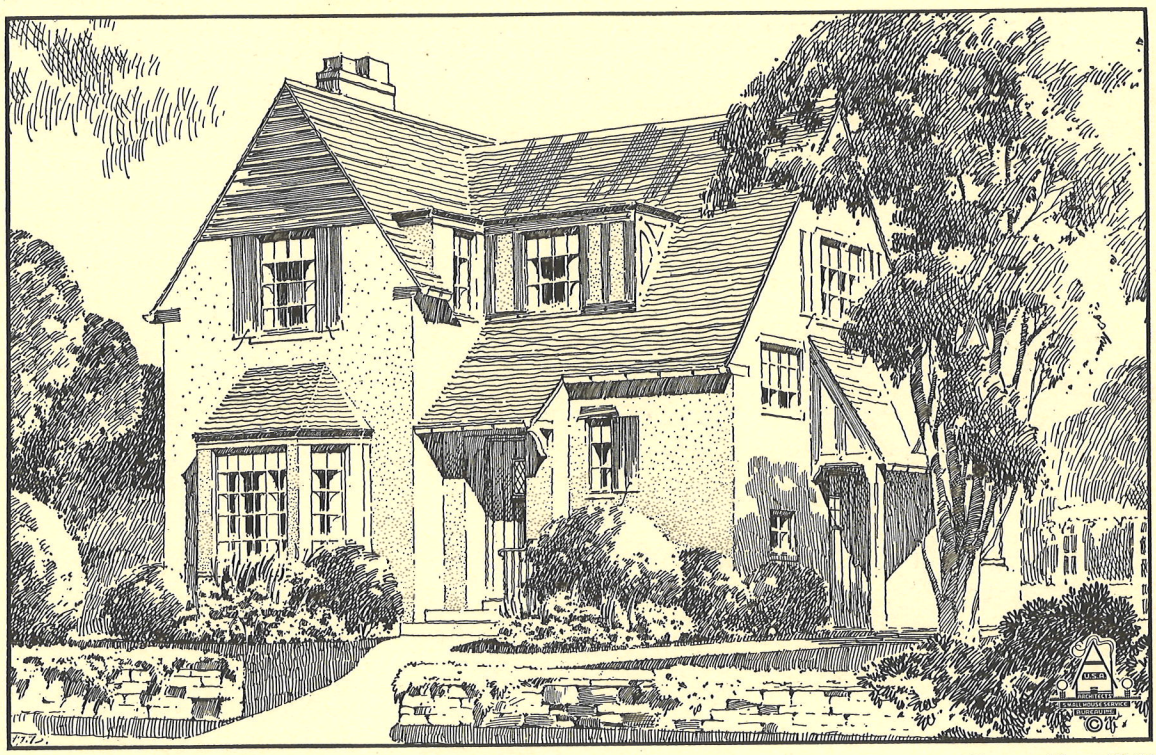

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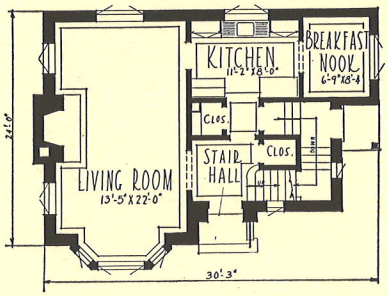

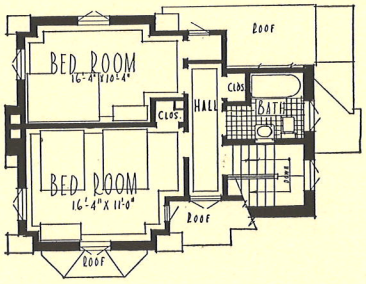

THE exterior appearance and the interior arrangement of this handsome home are in entire accord, for in both it is a home of distinction. Beautifully proportioned and designed, it has charming play of materials, changes in color, textures and a fine harmony of all of the parts.

Many people do not want a large and formal dining room and, on the other hand, they do not want to eat in the kitchen. This house satisfies such requirements with a breakfast nook. When occasion requires, a dining table can be set in the end of the living room.

The attractiveness of the spacious living room is enhanced by broad wall spaces and the artistic bay window at the front. The bedrooms are larger than usual and abound in closet space. They are both open in two directions and are consequently well lighted and ventilated.

Construction: Concrete masonry, portland cement stucco exterior finish, cement asbestos shingle roof, concrete first floor. *Facing:* South or east. *Lot size:* Approximately 40 feet.

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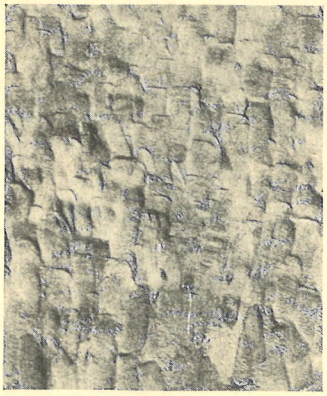
A. I. A. File 10 a 2

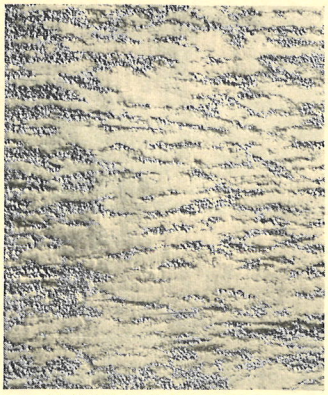
TYPICAL PORTLAND CEMENT STUCCO FINISHES



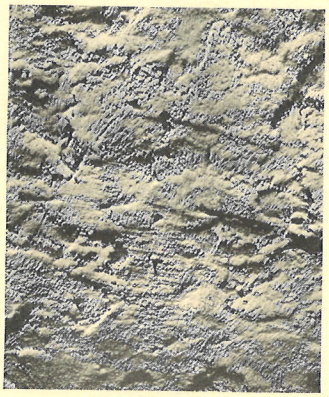
MOORISH
A surface tooled promiscuously with a round corner trowel

ENGLISH
A soft, heavy texture applied with wood float and brushed

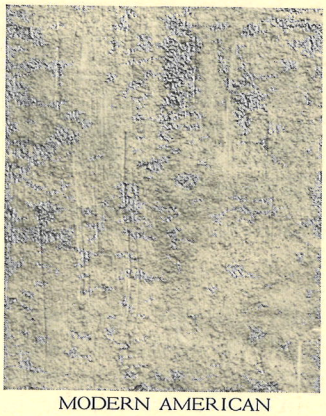
SPANISH
A wavy, trowel-marked finish, smoothly irregular



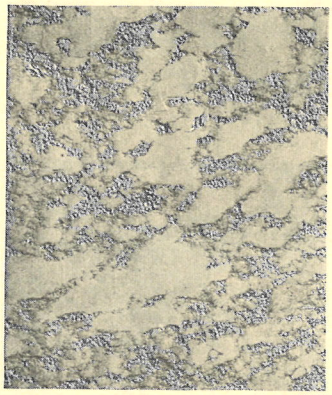
ITALIAN TRAVERTINE
A stippled surface veined by troweling high points smooth



CALIFORNIAN
A rough cast finish reduced by rubbing with a carpet-covered float



MODERN AMERICAN
A rough torn surface produced by drawing a board across the face



ITALIAN
A troweled, spatter dash finish with many variations

ENGLISH COTTAGE
A fine, leaf-like finish produced by feathering with trowel

FRENCH
A full, trowel-swept finish emphasizing application

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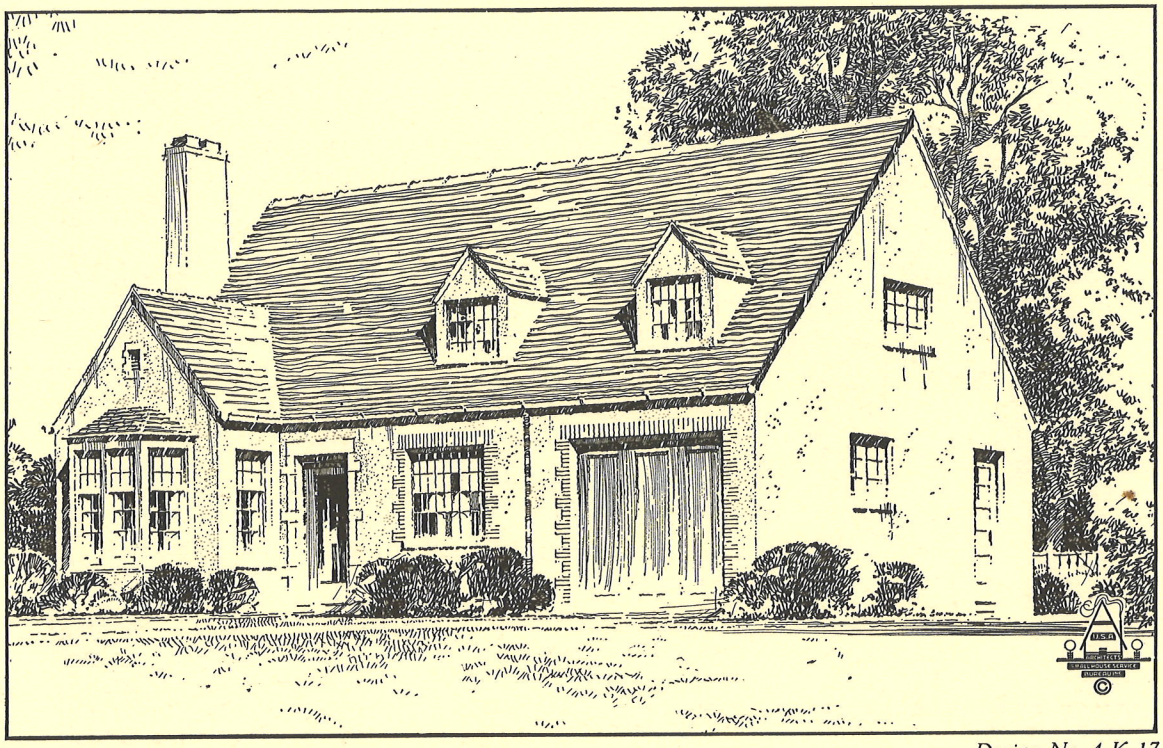

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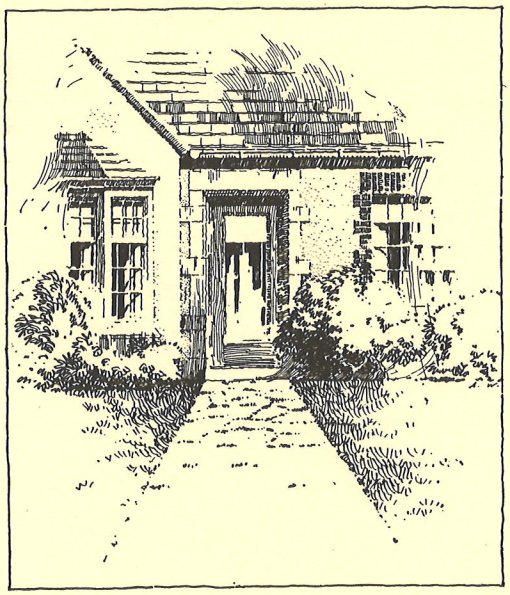

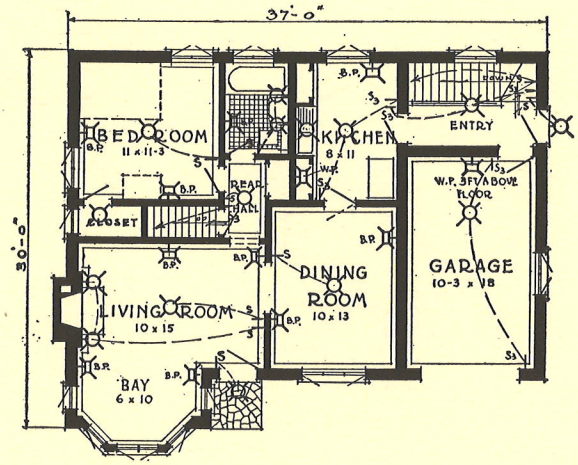

HERE is a charming five-room house with a built-in garage forming an integral part of the structure—convenient and unobtrusive.

The living room is attractive and interesting with a handsome fireplace trimmed in cast stone. The bay window, the ceiling of which is lowered slightly, adds unusual beauty to the room and provides good lighting and ventilation.

The dining room is likewise of good size and well lighted with broad casement windows. Plenty of wall space lends the room well to decoration and artistic arrangement of furniture. The bedroom windows open on two sides, insuring good ventilation. The bathroom and bedroom are separated from the rest of the house. The attic space is commodious and if desired may be divided into as many as three rooms.

Construction: Concrete masonry, portland cement stucco exterior finish, cement asbestos shingle roof, concrete first floor. *Facing:* South or east. *Lot size:* Approximately 50 feet.

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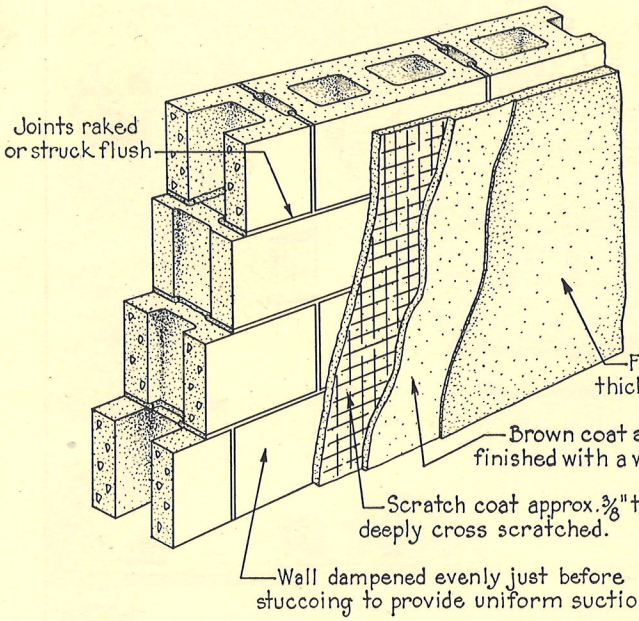
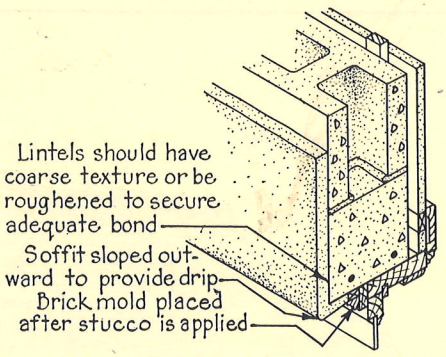
A. I. A. File 10 a 2

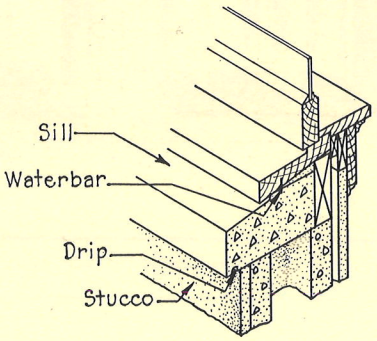
STUCCO APPLICATION ON CONCRETE MASONRY


Joints raked or struck flush
Finish coat approx. 1/8" thick, thickness depends on texture.
Brown coat approx. 3/8" thick, finished with a wood float.
Scratch coat approx. 3/8" thick deeply cross scratched.
Wall dampened evenly just before stuccoing to provide uniform suction

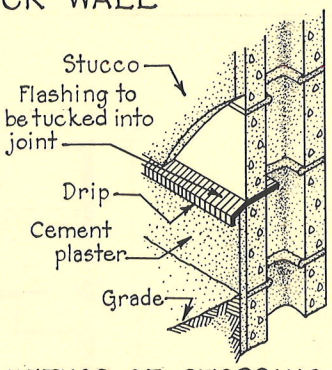
CONCRETE TILE OR BLOCK WALL


Lintels should have coarse texture or be roughened to secure adequate bond
Soffit sloped outward to provide drip
Brick mold placed after stucco is applied

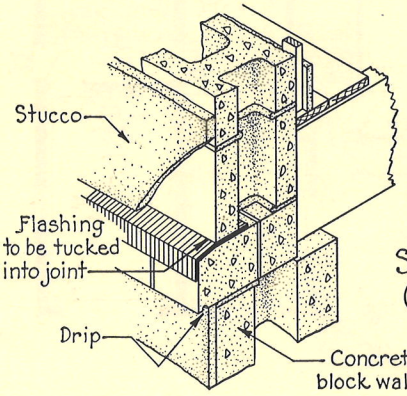
DETAIL OF WINDOW HEAD



DETAIL OF WINDOW SILL

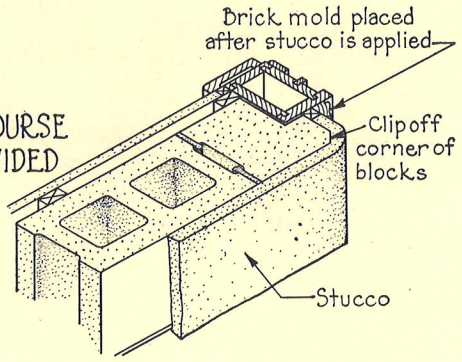


METHOD OF STOPPING STUCCO WHERE NO BELT COURSE OR SOLDIER COURSE IS PROVIDED



DETAIL OF FLASHING WATERTABLE OR BELT COURSE

Note:- Drip on belt courses, sills etc. must project clear of stucco.



DETAIL OF WINDOW JAMB

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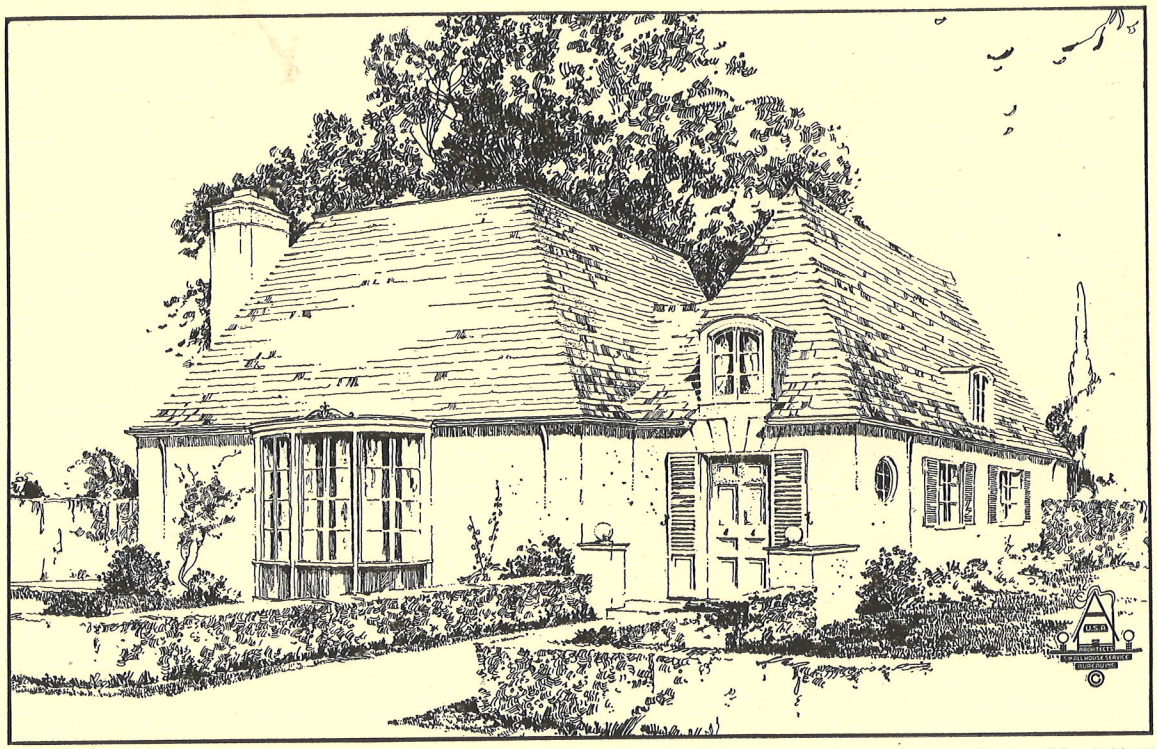
Attractive Small Homes of Concrete Masonry—9



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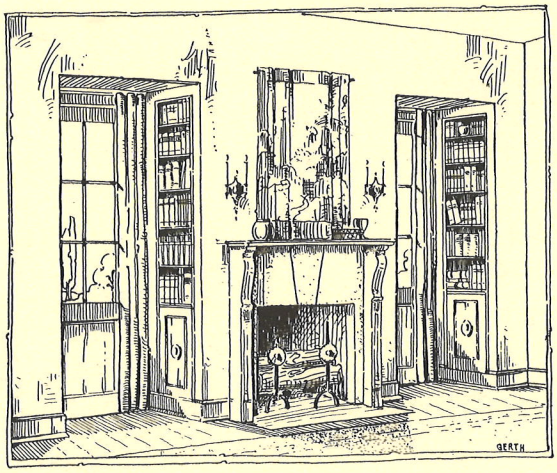

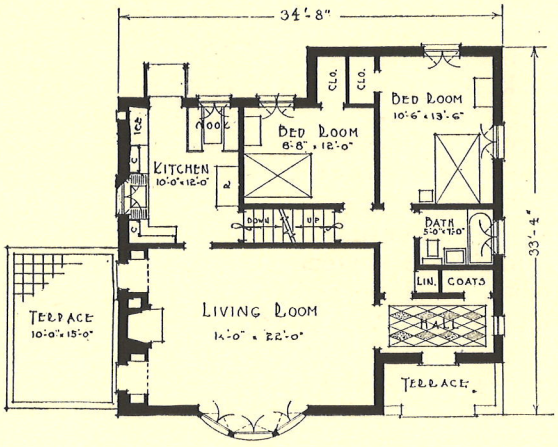

IN design, this attractive little house is delightfully reminiscent of the old cottages of provincial France. The steeply pitched roof, the slight arch of the dormers, the rounded bay window with wrought iron ornament above, and the interesting entrance all lend distinction to this house. The entranceway is recessed several feet and low stucco walls extend out to partially enclose a small paved terrace.

Privacy may be had in every room, including the living room. The wide doorway from the entrance hall may be closed by the double doors which are ordinarily folded back against the wall in the living room, where their polished paneled surfaces are of distinctly decorative value. The bay window and French doors on either side of the fireplace make the room light and cheerful. A stairway from the hall gives access to the second story, where a large bedroom may be finished off if desired.

Construction: Concrete masonry, exterior of portland cement stucco, cement asbestos shingled roof, first floor of reinforced concrete. *Size of lot:* 45 feet. *Facing:* North or west.

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A. I. A. File 10 a 2

THE MODERN TREND IS TOWARD UTILIZATION OF BASEMENT SPACE

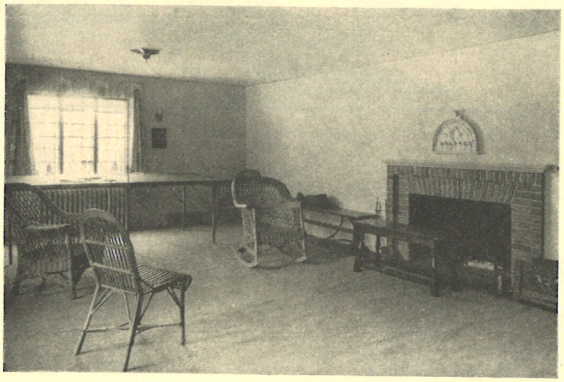
THE trend in modern residence construction is to make as much of the structure livable as possible. Heretofore the basement space was frequently considered only as a place to house the heating plant, fuel bin and as a general

catch-all store room. As a matter of fact the basement, if it is built so that it will be dry and warm, offers many possibilities for increasing home comforts.

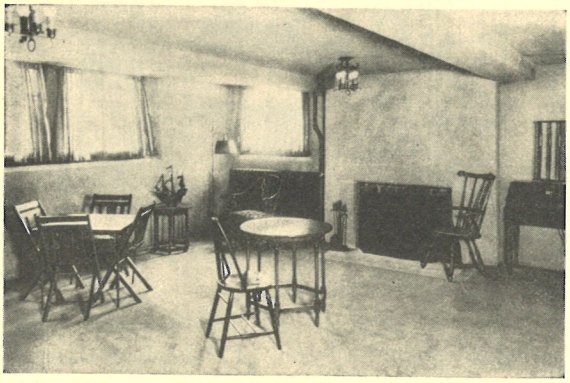
The tendency to make the modern heating plant and other service facilities clean, compact and attractive makes available a goodly part of the basement space which can be turned into a playroom, den, billiard room, music room, workshop and in fact practically any type of room that the owner may wish. The basement is usually the coolest place in the summer and is easily heated in the winter. It is therefore only necessary to provide adequate lighting and decorative finish to make living or working conditions in the basement comparable to those of above grade rooms.

Making the basement livable means designing and building the floor, walls and ceiling so that they will be dry, clean, sanitary and of attractive appearance. All of these requirements are fully met through the use of concrete. Concrete floors are smooth, durable and easily kept clean. They may be colored, marked off into patterns or given any of the numerous attractive finishes commonly used in connection with permanent, firesafe concrete floors in above grade construction.

For basement walls concrete construction, either monolithic or concrete masonry, is generally accepted as standard. Such walls can be made watertight, insuring dry interior surfaces, which may be plastered, stained, painted or given a variety of other attractive and inexpensive decorative wall treatments that are so helpful in making basement rooms cheerful and usable.



Basement space, if dry and warm, offers almost unlimited possibilities for increasing home comforts. Building the foundations and basement floor of concrete not only provides dryness, warmth and cleanliness but likewise makes possible a number of attractive and inexpensive decorative treatments.



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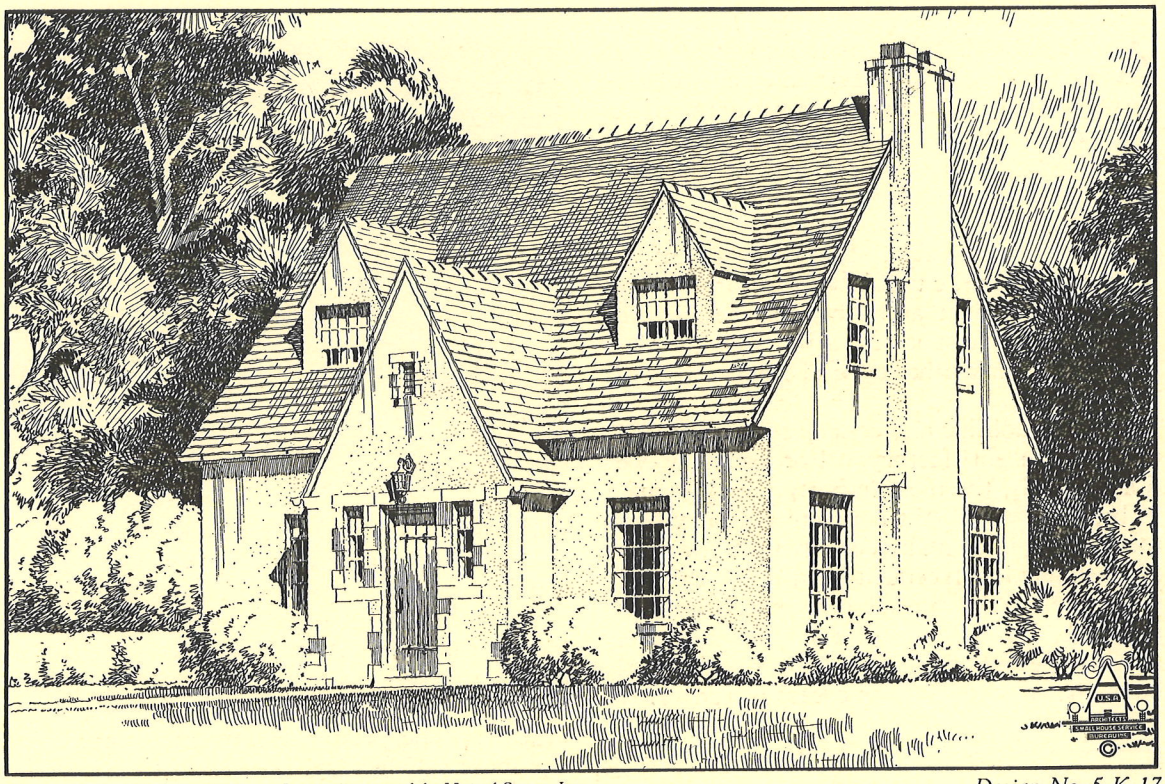
Attractive Small Homes of Concrete Masonry—10



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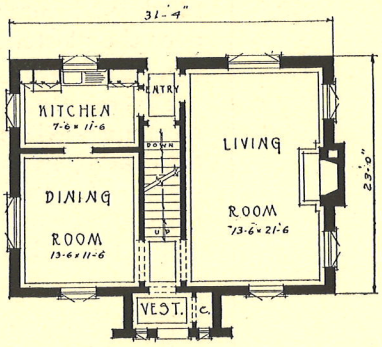
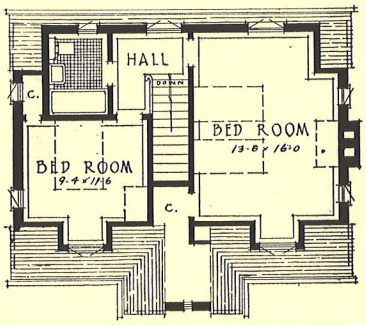


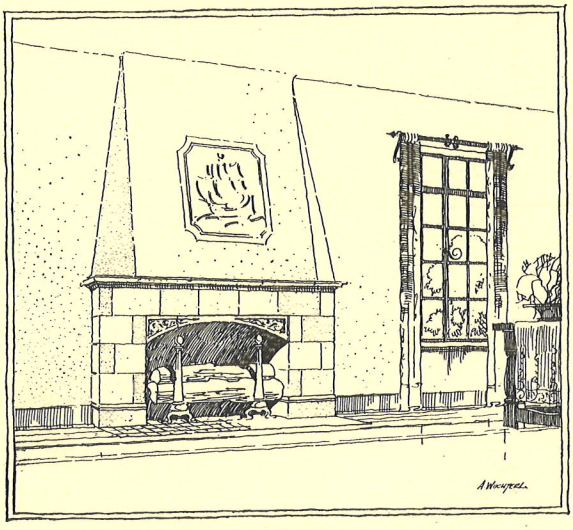


HERE is a five room, story-and-a-half home done in English Manor architecture with close clipped eaves and peaked roof. The spaces within are well arranged and abundant to meet the needs of the small family.

The foundations and walls are of concrete masonry, the exterior finish is of cement stucco and the roof is planned to be covered with cement asbestos shingles. In addition, the first floor may be of reinforced concrete finished with wood, linoleum or the concrete surface itself may be decoratively treated.

The firesafeness of this house will appeal to the home owner. The furred exterior walls will be dry and warm. For many localities, where exterior walls of masonry and roof of fire resisting qualities are required by ordinance, this home of inexpensive type will prove most desirable.

Construction: Concrete masonry, exterior finish portland cement stucco, roof of cement asbestos shingles, concrete floor. *Size of lot:* Approximately 40 feet. *Facing:* North or west.



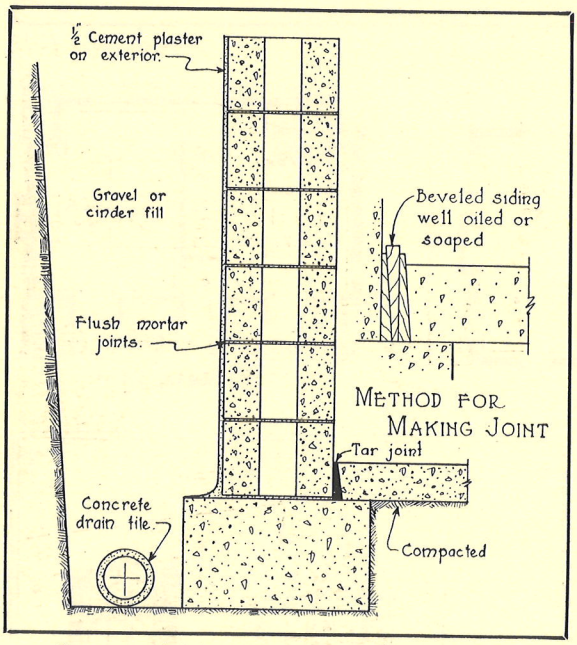
This is one of a series of plans and home building studies prepared through cooperation with the Architects Small House Service Bureau to promote better design and construction in the small home. Complete working drawings and specifications for the house shown above may be secured at moderate cost from the Architects Small House Service Bureau at 7 West Madison Street, Chicago.

A. I. A. File 10 a 2

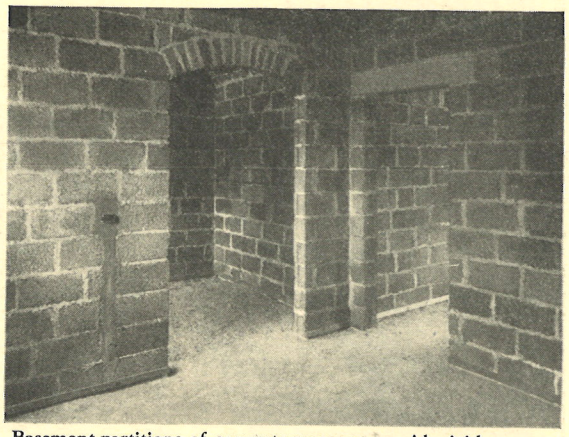
BASEMENT CONSTRUCTION

A FUNDAMENTAL requirement of a permanent building is a permanent foundation. To be permanent, it must be strong, fireproof, rot proof and above all, watertight. When built of concrete, the foundation wall meets all of these important requirements and is a big factor in building a basement which can be made warm, dry and livable. Such a basement, besides providing the usual location for the laundry, heating plant and other service facilities, affords desirable space for a playroom, billiard room or for any other type of room the owner may wish.

Both monolithic and concrete masonry foundations are satisfactory. For ordinary well drained soils, the most important requirement in building watertight concrete masonry basement walls is to make certain that the joints are well filled with cement mortar and carefully pointed. If the subsoil does not have good drainage, concrete drain tile placed entirely around the outside of the footing and slightly below it will carry off the excess water. If the soil is very retentive of moisture or the water table is likely to rise above the footing the usual treatment is to apply two or more coats of portland cement mortar to the exterior surface of the walls. Another common treatment of water-proofing is to coat the exterior surface with hot tar, pitch, or other bituminous preparation. The plaster treatment is generally the more satisfactory, however. In extremely wet soils both treatments are sometimes applied, the bituminous preparation being placed over the plastering coat after it has hardened.



Recommended design for watertight basement walls.



Basement partitions of concrete masonry provide rigid support for upper floors and partition walls.

Basement Partitions

Basement partitions of concrete masonry are recommended for carrying the weight of upper floors and partitions in preference to beams and posts. The rigid supports for floors and partitions afforded by such walls minimize cracking of plaster or loosening of interior trim.

Where used to partition off the basement space into rooms, concrete masonry walls afford fireproof enclosures for heating equipment and fuel, confine steam, moisture and odors and provide insulation for fruits, vegetables or other perishables. Where used as divisions between rooms, partitioned off for recreation facilities, the concrete masonry wall provides soundproofness and permits the application of plaster direct, making decorative treatment inexpensive.

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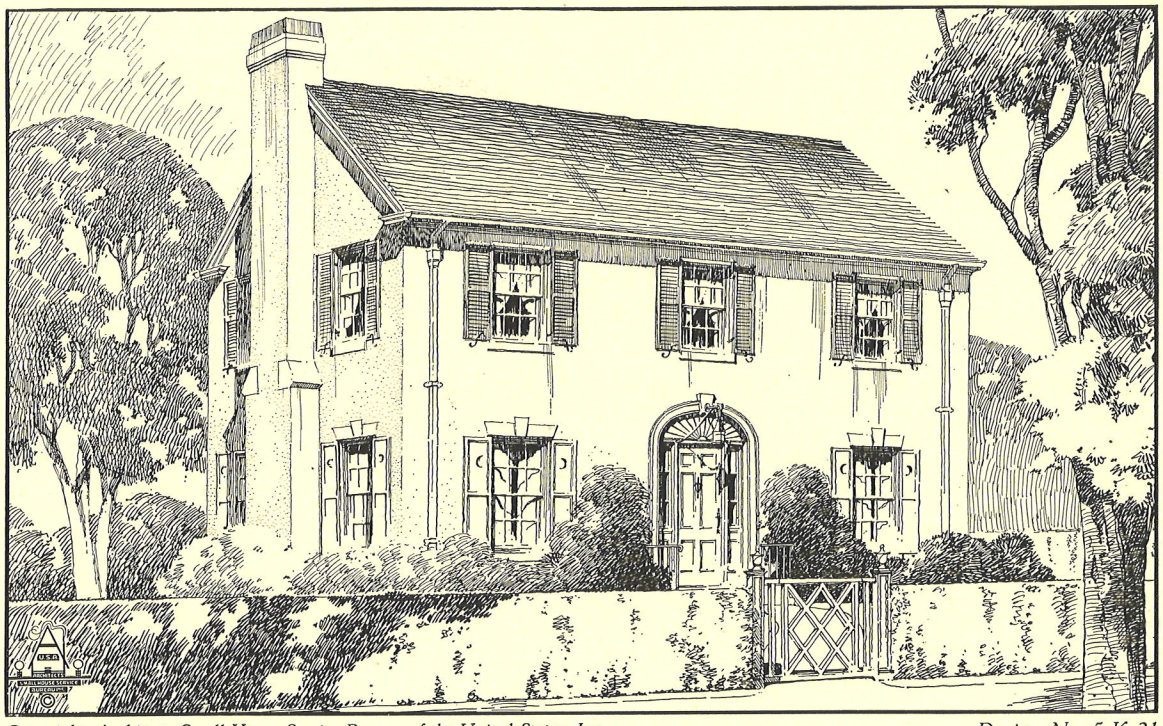

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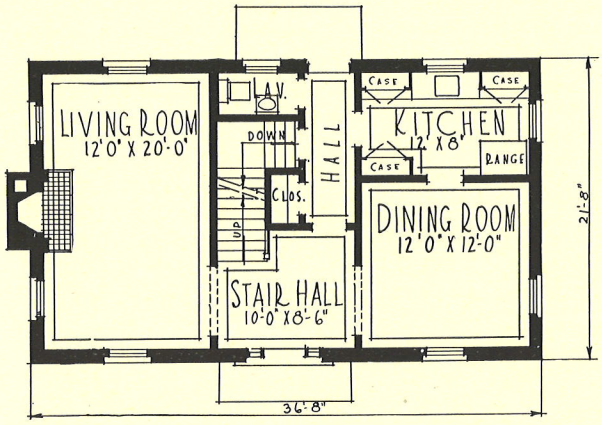

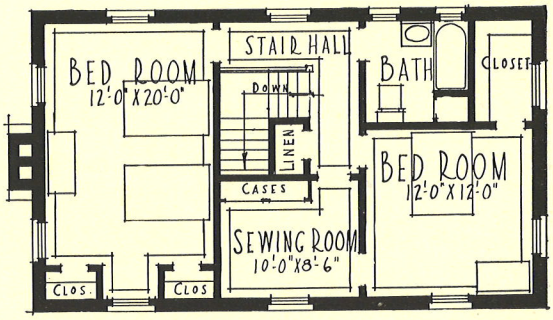

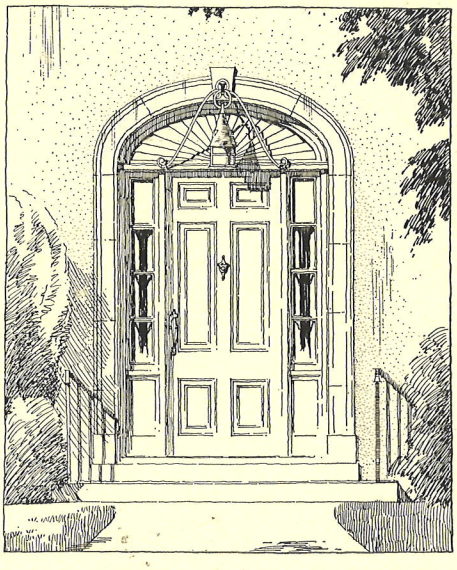

EVEN the most inexperienced layman will appreciate the appeal of this charming home, designed to meet the requirements of the average American family.

A large living room, a downstairs lavatory, a well-arranged kitchen, a large bedroom with plenty of closet space and the convenient sewing or dressing room opening from the smaller bedroom are distinctive features in this desirable plan.

Exterior walls are of concrete masonry giving protection from outside fire hazards; the first floor is of concrete, preventing the spread of fires starting in the basement, while the roof is of firesafe cement asbestos shingles. Cross walls in the basement are also of concrete masonry.

Construction: Concrete masonry, exterior finish of portland cement stucco, first floor of reinforced concrete, roof of cement asbestos shingles. *Lot size:* 45 or 50 feet. *Facing:* East or south.

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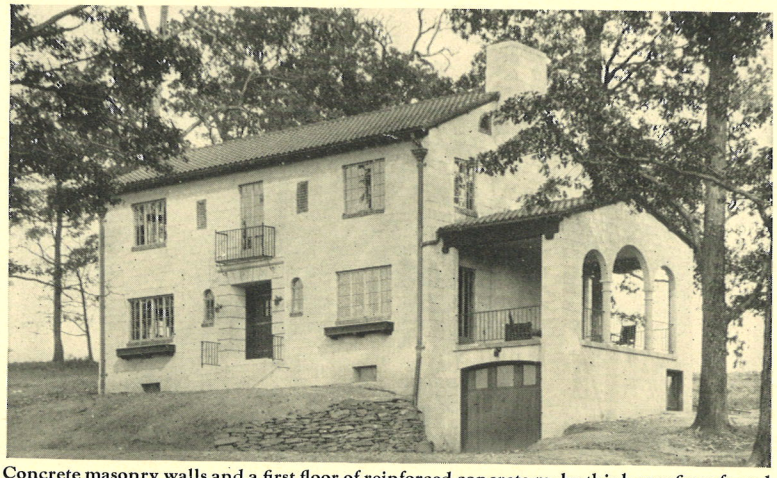
A. I. A. File 10 a 2

FIRESAFE FLOORS FOR RESIDENCES



Concrete masonry walls and a first floor of reinforced concrete make this home firesafe and structurally permanent.

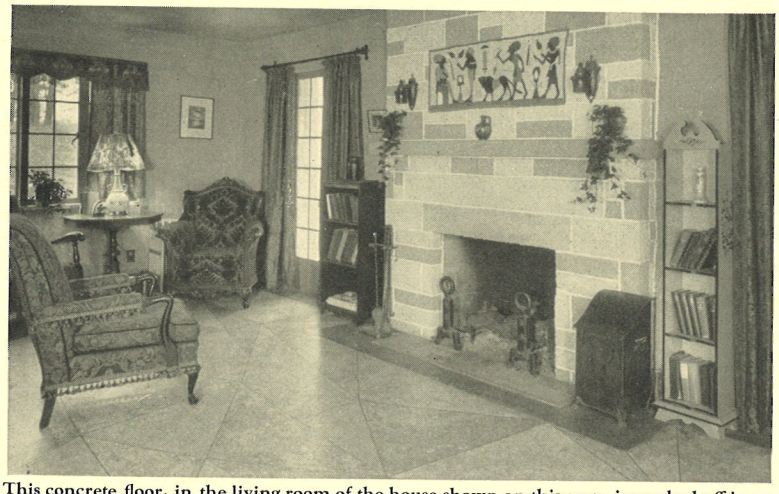
THE last few years have witnessed a remarkable increase in the number of firesafe residences built. This trend is bringing into popularity one of the most logical methods of fire control—the concrete floor. It is known that a large percentage of the annual residence fire loss is due to fires originating in the basement. A concrete floor slab completely seals up the coal pile, furnace and other sources of basement fires. In residence hotels, apartment buildings, and the most expensive private homes, concrete floors have for years been accepted as good construction. It was inevitable that they should be adapted to the small home.

A concrete floor is permanent, ratproof, and verminproof. It precludes such structural defects as warping, cracking, buckling, and eliminates vibration and movement of any kind. The greater rigidity resulting adds strength and stability to the whole structure and helps to do away with much cracking in plastered walls and ceilings.

It was once believed that concrete floors were cold, due probably to the fact that basement floors are often cold and damp because they are laid directly on damp earth. Where a concrete floor is separated from the ground by an air space or where it is used above a basement, as is the case in most sections of the country, it is as dry and warm as the atmosphere around it. This is well demonstrated by the successful use of concrete floors in apartment buildings, hotels, and hospitals. Certainly they would not be so popular in these types of buildings were they not warm, dry, and sanitary.

Developments in artistic floor finishes have progressed rapidly in the past few years and today there is a wide variety of treatments suitable to all types of architecture and interior decoration. Another sheet of this series describes several of these and if further information is desired, a copy of "Concrete Floors for Residences" describing concrete residence floor construction and finishes will be gladly sent upon request.

Perhaps no other method of finishing has enjoyed such success as that which develops beauty and character in the concrete itself.



This concrete floor, in the living room of the house shown on this page, is marked off in an attractive pattern and highly polished.

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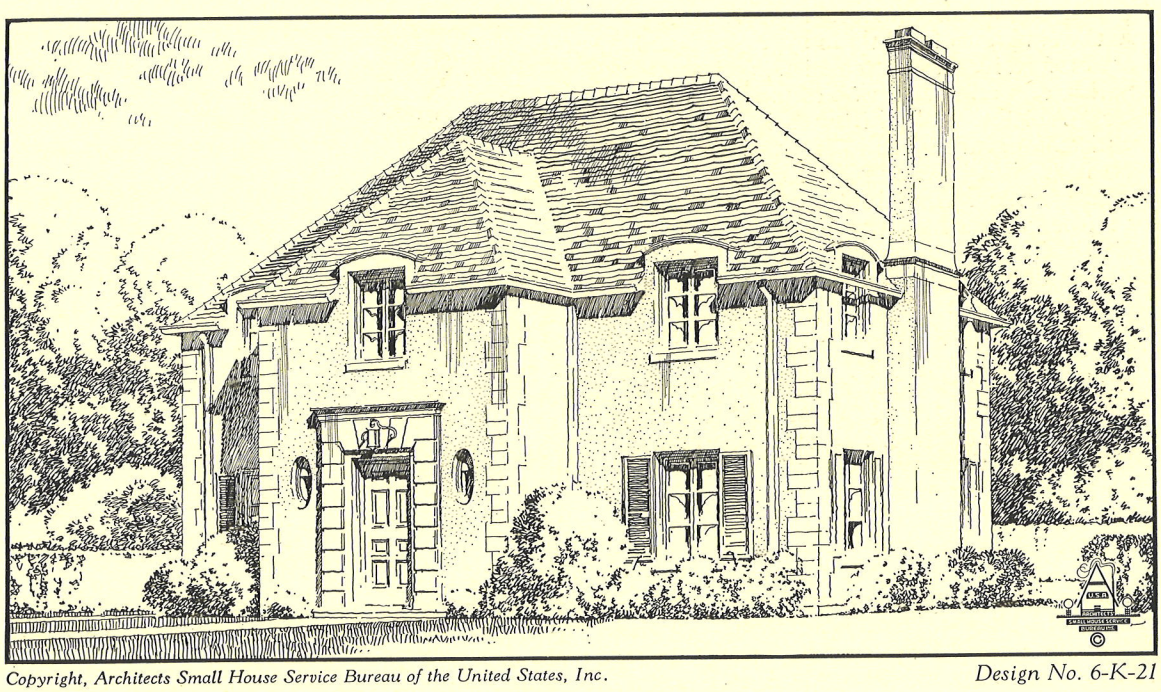
Attractive Small Homes of Concrete Masonry—12



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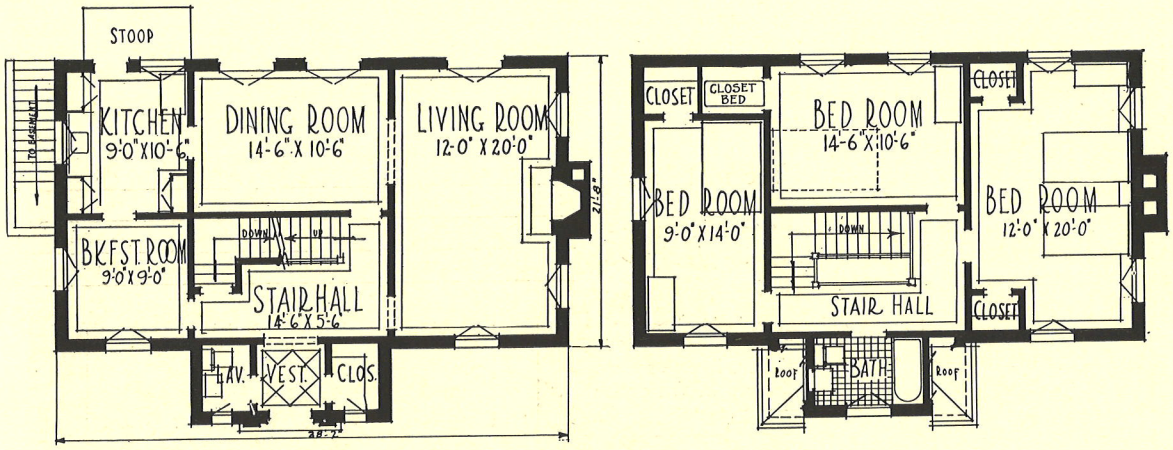
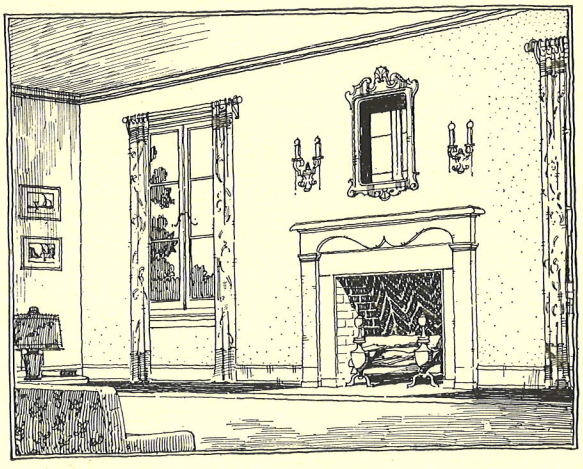


THIS residence presents a number of desirable features which appeal to home owners. For instance, both the living and dining rooms face upon the garden, French doors protected by heavy wooden shutters opening upon it from both rooms. There is a downstairs lavatory. A well-lighted breakfast nook opens off the kitchen. A good sized coat closet adjoins the vestibule.

Upon the exterior, exposed concrete block at the corners and cast stone trim around the doorway adds beauty in scale and mass to the stuccoed concrete masonry walls.

Construction: Concrete masonry, exterior finish portland cement stucco, first floor of concrete, concrete tile shingles. *Size of lot:* 50 feet. *Facing:* North or west.



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A. I. A. File 10 a 2

SOLID SLAB CONCRETE RESIDENCE FLOORS

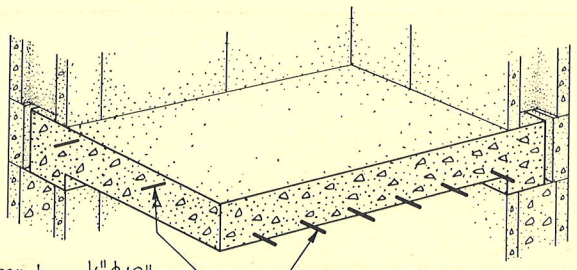
THE solid slab concrete floor is perhaps the simplest of the three types of firesafe floors for residences. It consists, as its name implies, of a reinforced slab of uniform thickness. A 4-inch slab thickness is commonly required for spans up to 10 feet while a 6-inch slab is used for spans up to 16 feet. Where spans are more than 16 feet, bearing walls or reinforced concrete beam supports are required. This type of floor permits a saving of several inches in wall height over other types and has an additional advantage in that plaster may be applied directly to the under side of the slab.

In building the solid slab floor, a tight wooden false floor is constructed of sufficient strength to support the concrete and steel as well as the weight of the workmen and equipment required. The false floor is commonly made up of 1-inch boards supported on 2 by 6-inch joists, which in turn are supported by 4 by 4-inch posts and stringers placed at regular intervals. The distance between posts is governed by the thickness of the slab and the size of the stringers.

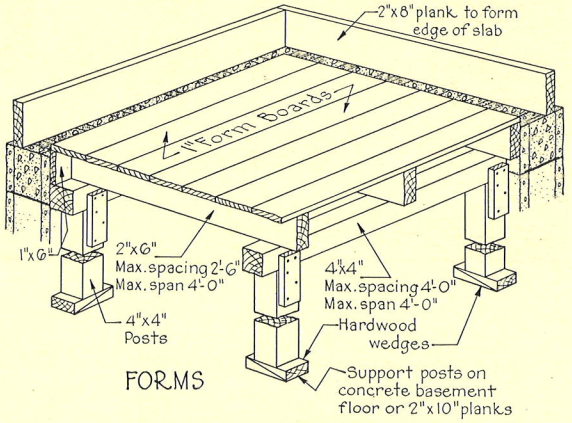
Reinforcing steel is placed after the form work is built and all conduits and pipes have been placed. Size and spacing of the steel for various spans of solid slab floors is shown in the accompanying table. The reinforcing bars are supported on suitable chairs about ¾ inch above the false floor.

Temperature reinforcement, consisting either of wire fabric or ¼-inch bars, is placed in the top part of the slab, about ¾ of an inch below the surface and at right angles to the main reinforcing steel.

Detailed information regarding the construction of concrete residence floors will gladly be sent upon request.

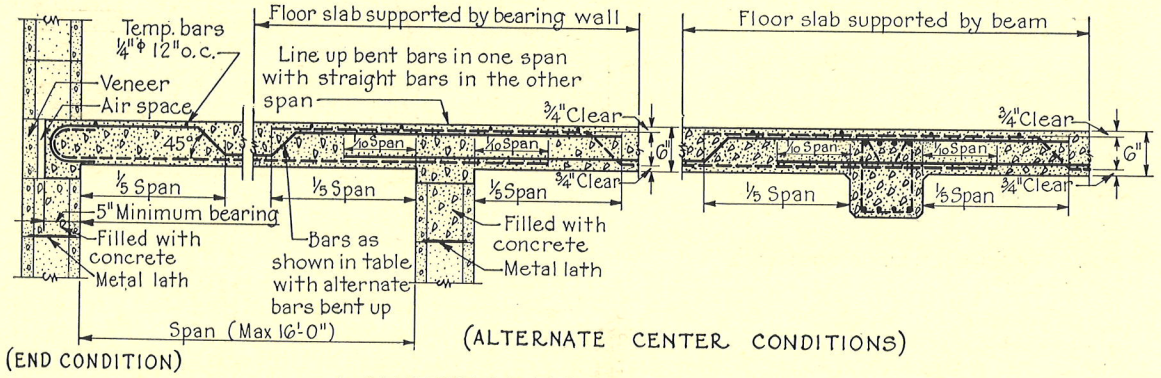


PERSPECTIVE


2"x6" plank to form edge of slab
1" Form Boards
1"x6"
2"x6" Max. spacing 2'-6" Max. span 4'-0"
4"x4" Posts
4"x4" Max. spacing 4'-0" Max. span 4'-0"
Hardwood wedges
Support posts on concrete basement floor or 2"x10" planks
FORMS

Reinforcing Bars

Span	Diameter	Spacing
16 to 14 ft.	⅝ in.	5 in.
14 to 12 ft.	½ in.	6 in.
12 to 10 ft.	½ in.	8 in.
10 ft. or less	⅜ in.	7 in.



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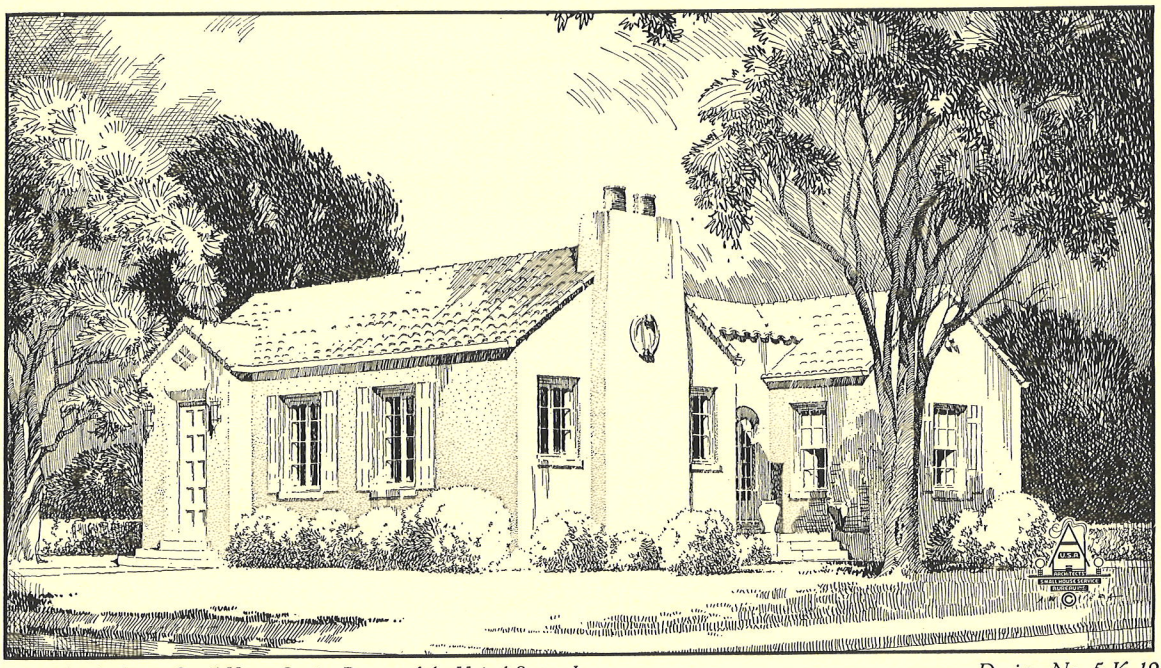

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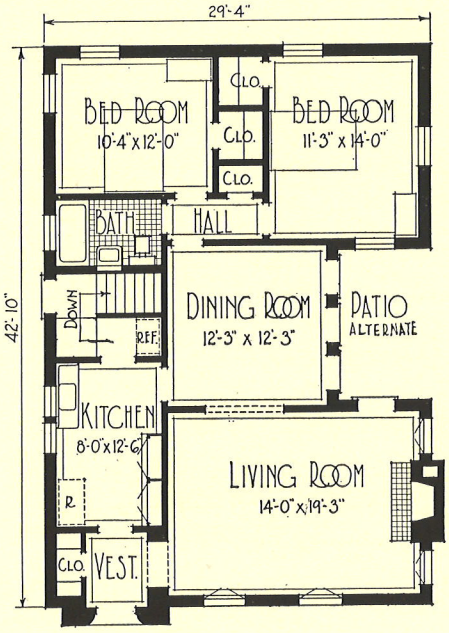

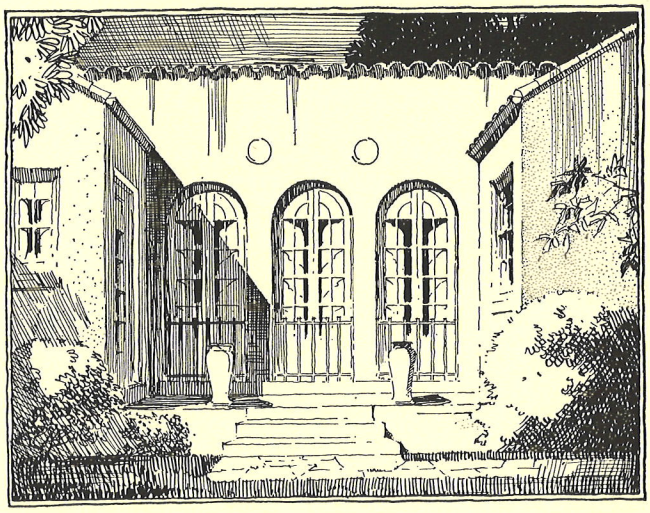

THIS bungalow, original in design and interesting in treatment, should please any prospective home owner who is endeavoring to avoid the commonplace. Pleasing touches of mission style in the general profile testify to its California origin, but the house will grace any site in any locality. The character of the architecture is simple and straightforward so as to keep down the cost of construction, yet there is a decorative quality to the whole.

The living room is of good size and well lighted with casement windows. A plastered arch separates it from the dining room. Front doors lead from both dining room and living room to the patio. These have arched openings, as are shown in the sketch. The patio may be enclosed with a wall or left open along the outer edge with a protective wrought iron rail. Colorful canopies may be arranged for shade and to add a note of color. At the rear, detached from the living quarters, are large bedrooms with generous closet space, and a well appointed bath.

Construction: Concrete masonry, exterior finish portland cement stucco. Concrete tile roof, first floor of concrete. *Size of lot:* Approximately 40 feet. *Facing:* South or west.

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A. I. A. File 10 a 2

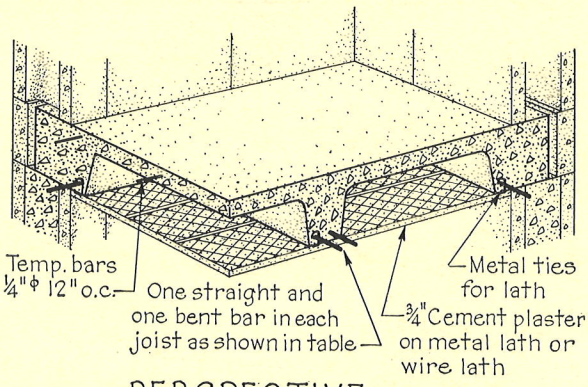
RIBBED CONCRETE RESIDENCE FLOORS

THE ribbed type of concrete residence floor is particularly adaptable to long span construction. This type of floor construction requires a minimum amount of material for a particular loading and span.

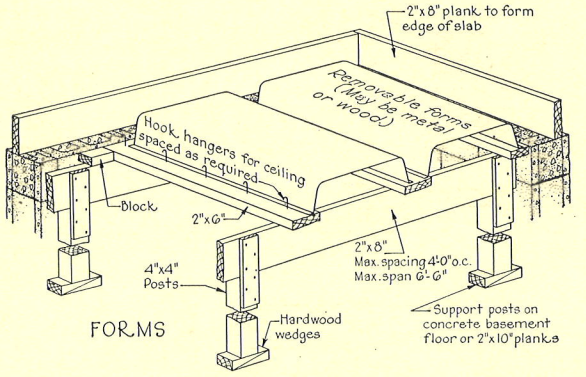
In this type of construction, use is made of inverted pans or forms, usually of 16-gauge metal, over which the concrete is placed to form the floor slab. The pans are supported on 2 by 6-inch planks which also serve as forms for the joist bottoms. Sufficient space is left between the pans to permit the forming of joists of the required width. Joist width in most cases is 4 inches but for spans longer than 16 feet, it may be necessary to increase this width. In the latter case it is sometimes more economical to increase the size of the steel reinforcing rather than the width of the joists. For most spans in residence construction, the 6 by 20-inch metal pans are used and the supporting planks or joist bottoms are spaced 24 inches on center.

The main reinforcing steel is placed between the rows of removable metal forms. Size and spacing of the steel for various spans is shown in the accompanying table. The steel bars are supported on suitable chairs about ¾ inch above the bottom and the same distance from the sides of the joists, to protect the steel against corrosion and possible injury from fire. Temperature reinforcement, consisting either of wire fabric or ¼-inch steel bars is placed in the top part of the slab about ¾ of an inch below the surface. If bars are used they are placed crosswise of the joists.

Metal lath, for plastered ceilings, is held in place by hangers or nails left projecting from the joists when the concrete is placed.

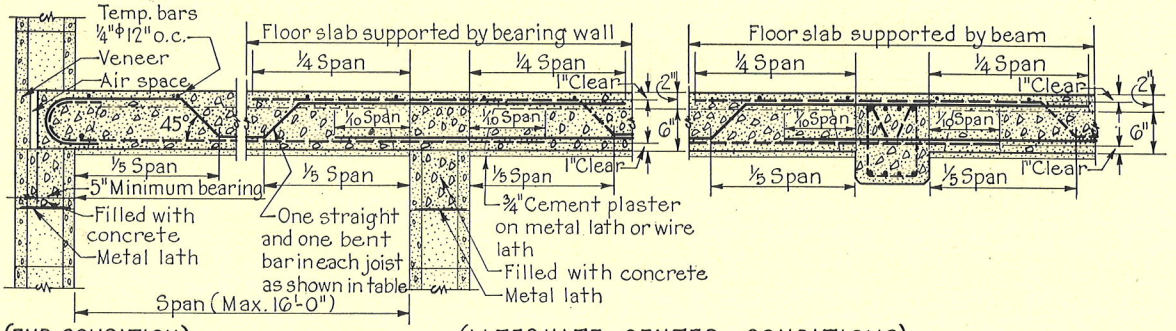

Temp. bars ¼"ϕ 12" o.c.
One straight and one bent bar in each joist as shown in table
Metal ties for lath
¾" Cement plaster on metal lath or wire lath

PERSPECTIVE


2"x8" plank to form edge of slab
Removable forms (May be metal or wood)
Hook hangers for ceiling spaced as required
Block
2"x6"
2"x8" Max. spacing 4'-0" o.c. Max. span 6'-6"
4"x4" Posts
Hardwood wedges
Support posts on concrete basement floor or 2"x10" planks
FORMS

Reinforcing Bars

Span	Bars per Joist	
	Straight	Bent
16 to 14 ft.	One—¾ in.	One—⅝ in.
14 to 13 ft.	One—⅝ in.	One—⅝ in.
13 ft. or less	One—½ in.	One—½ in.



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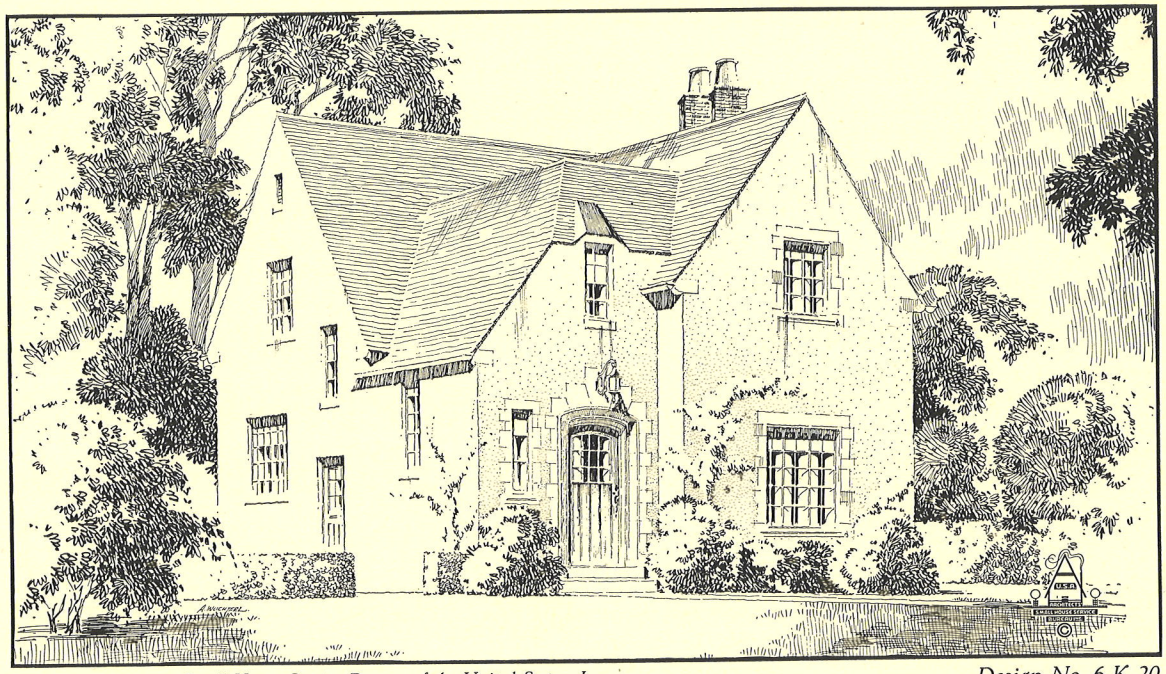

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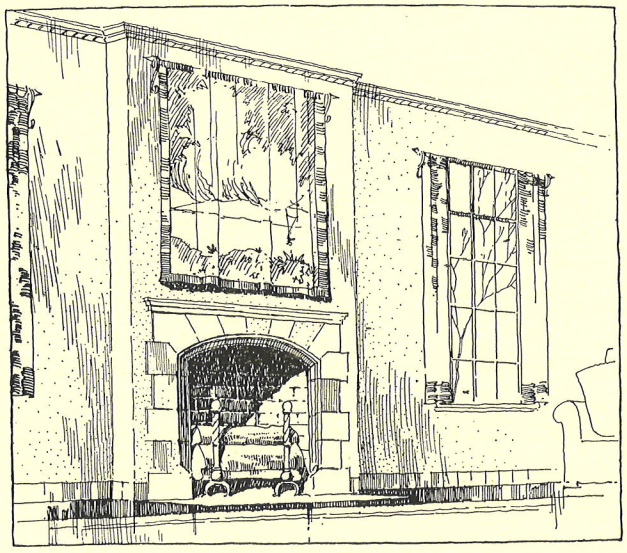
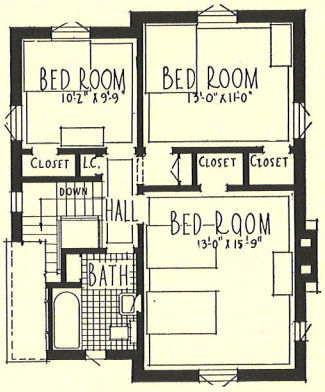
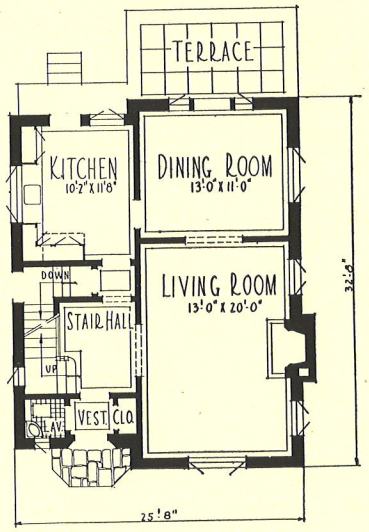






THE home owner who wishes a home that is as pleasant to look at as it is comfortable to live in, and is yet well within average means, can select none more suitable in design than this six-room house.

About the house are several details of arrangement which are so desirable in the modern home. In the vestibule there is a convenient clothes closet at the right and a lavatory at the left. An arched doorway leads into the stair hall and a similar doorway from the hall gives entrance to the good sized living room. Beyond the living room is the dining room, these rooms being so arranged as to give a vista through to the open terrace and garden beyond. Bedrooms are light, airy, and commodious as are all rooms throughout the house.

Construction: Concrete masonry, exterior finish portland cement stucco, concrete first floor, cement asbestos shingle roof. *Size of lot:* Approximately 35 feet. *Facing:* West or north.

This is one of a series of plans and home building studies prepared through cooperation with the Architects Small House Service Bureau to promote better design and construction in the small home. Complete working drawings and specifications for the house shown above may be secured at moderate cost from the Architects Small House Service Bureau at 7 West Madison Street, Chicago

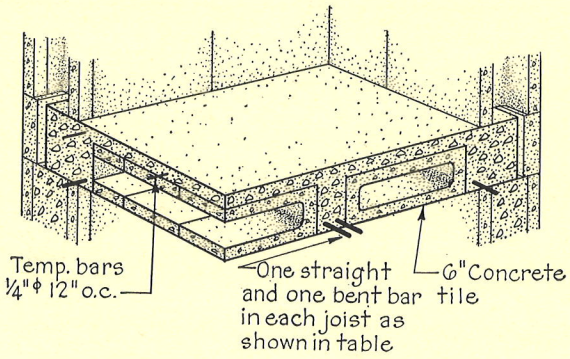
A. I. A. File 10 a 2

TILE AND JOIST CONCRETE RESIDENCE FLOORS

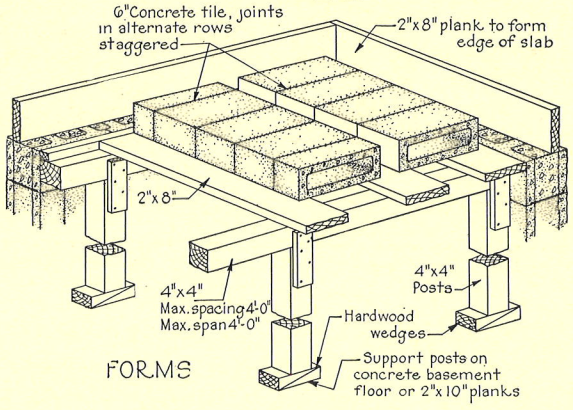
THE tile and joist concrete residence floor, consisting of a combination of concrete hollow tile or block and reinforced concrete joists, is much the same as the ribbed type. The essential difference is in the forms. Instead of inverted removable metal pans as used in the ribbed type to form the floor slab, hollow concrete tile are spaced a few inches apart, and the concrete placed about and over them. The concrete between the tile acts as a beam or joist to support the floor. The tile remain embedded in the concrete and become an integral part of the floor. The hollow air spaces in the tile increase the soundproofness and provide insulating value. This type of construction likewise presents an excellent base for the application of plaster direct to the under surface where desired.

In building the floor, the hollow concrete tile are supported on planks spaced at proper intervals to allow at least two inches bearing of the tile on them. Planks 2 by 8-inches are most commonly used. These allow enough space between the tile to form 4-inch joists, the planks forming the joist bottom. The reinforcing steel is placed in the space between the tile and is supported on suitable chairs about ¾ inch from each side and above the bottom. Temperature reinforcement, consisting of ¼-inch round bars or wire fabric weighing not less than 25 lbs. per 100 square feet, is placed in the top part of the slab about ¾ inch below the surface.

Further information on the construction of concrete residence floors will gladly be sent upon request.

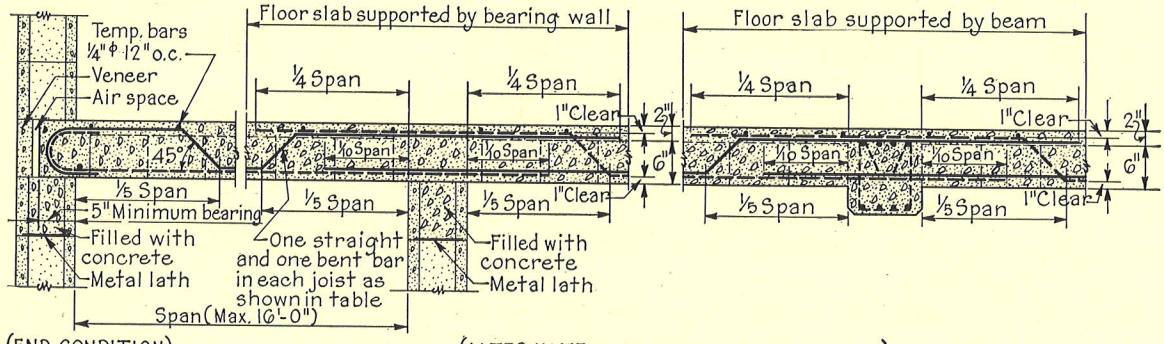


PERSPECTIVE


6"Concrete tile, joints in alternate rows staggered
2"x8" plank to form edge of slab
2"x8"
4"x4" Posts
4"x4" Max. spacing 4'-0" Max. span 4'-0"
Hardwood wedges
Support posts on concrete basement floor or 2"x10" planks
FORMS

Reinforcing Bars

Span	Bars per Joist	
	Straight	Bent
16 to 15 ft.	One—¾ in.	One—⅝ in.
15 to 13 ft.	One—⅝ in.	One—⅝ in.
13 ft. or less	One—½ in.	One—½ in.



(END CONDITION) (ALTERNATE CENTER CONDITIONS)

LONGITUDINAL SECTION THROUGH JOIST

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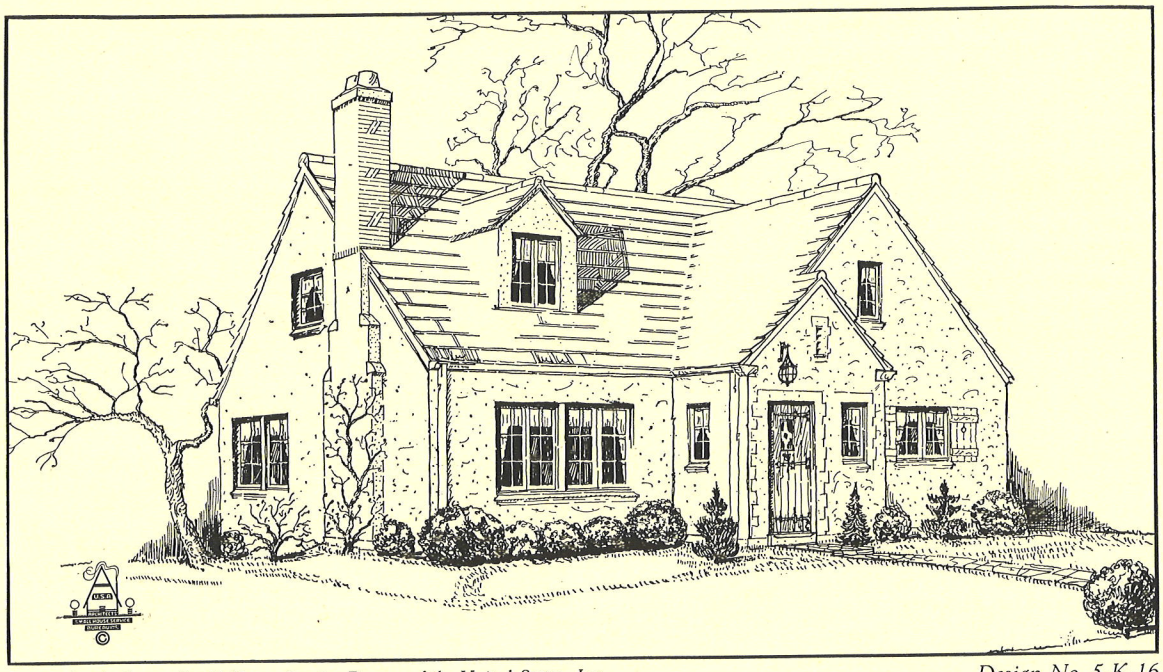

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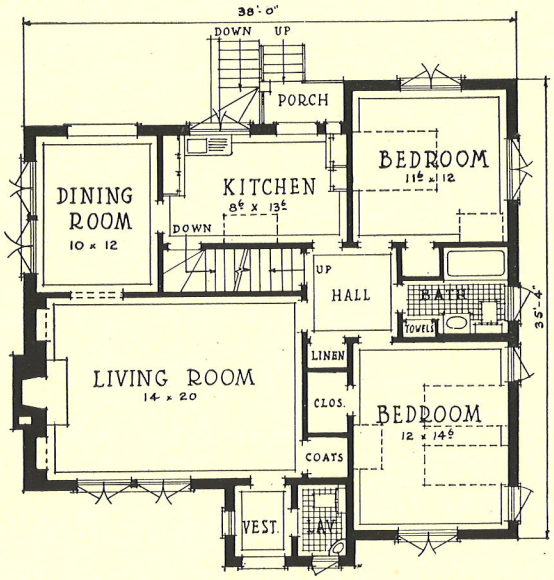
Design No. 5-K-16

THIS simple little five-room bungalow represents the maximum in comfort, space and beauty at a minimum cost. It is of a design that will especially appeal to the home builder who is looking for something that is unobtrusive in appearance, yet gives an impression of real value and solidity. There is nothing extreme or peculiar about it, consequently, the house will never lose value by going out of style.

A study of the plan reveals a number of desirable features in arrangement. Off the vestibule, a lavatory is shown. This may be omitted if economy rules, however. The vestibule opens onto a large living room with plenty of uninterrupted wall space which lends itself well to artistic arrangement of furnishings. At the end of the room is a massive fireplace, flanked on both sides by bookcases. At the front is a broad window opening with four casement sash.

A plastered archway from the living room gives entrance to the dining room, large and adequately lighted by four casement sash along the side and French doors opening to the garden terrace in the rear.

Bedrooms and bath are separated from the rest of the house and are connected with each other by a hall. Both bedrooms are quite large, well lighted and ventilated, and have plenty of closet space. Stairs in the bedroom hallway lead to an attic where additional rooms may be partitioned off later.



The kitchen is well arranged and equipped with every modern convenience. Stairways both outside and inside the house give access to the basement.

Construction: Concrete masonry, exterior finish portland cement stucco, reinforced concrete first floor, concrete tile roof. *Size of lot:* Approximately 50 feet.

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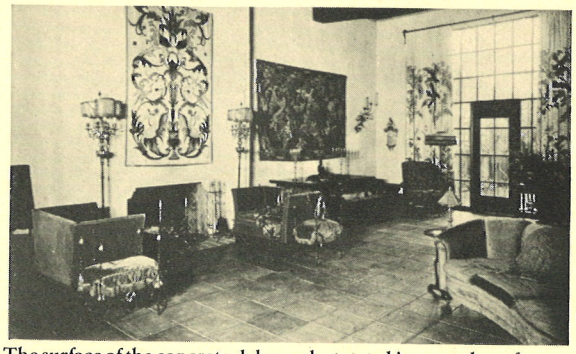
BEAUTY IN CONCRETE RESIDENCE FLOORS

Concrete floor tile offer a wide range in color and design. This surfacing is frequently used in living rooms, sun rooms, and dining rooms.



The surface of the concrete slab may be treated in a number of ways to produce an attractive finish. This one was marked off into squares and stained.

THE first aim of the home owner today is a distinctive, attractive house not only on the exterior but throughout the interior as well. Aside from structural and utilitarian advantages, one of the principal reasons for the remarkable popularity of the concrete residence floor of late years is its decorative possibilities. The variety of artistic treatments has been increased to such an extent that it is now a simple matter to select one suitable to any style of architecture or interior decoration. And most all of them are admirably suited to the means of the average home owner.

The painted or colored floor has proved exceedingly popular. The concrete can be painted any desired color or, through the use of special stains, any number of beautiful and artistic polychrome or tint effects can be achieved. This colored surface can then be waxed with ordinary floor wax to a high degree of lustre which forms a most attractive background for rugs and furniture.

There is also a distinct trend toward the use of linoleum flooring. As a base for this type of flooring material the concrete slab has no equal. The life of linoleum is not so much dependent upon the traffic over it as upon freedom from ridges and cracks beneath, which cut into the material. A concrete floor, however, provides a smooth, level base, free from ridges and recesses, to which the linoleum may be cemented down absolutely flat.

Cork tile, too, provides a resilient, soundproof surface. The random pattern illustrated here gives an unusually artistic effect.

Wood floor covering will, of course, always have its advocates. By embedding nailing strips in the concrete as it is placed a permanent, rigid support is afforded upon which oak, maple, or other hardwood floorings may be laid. The resulting floor is warp-proof and free from movement of any sort.

Probably no type of floor treatment offers greater possibilities for artistic expression than the concrete surface itself. It may be marked off into squares, triangles, rectangles, or any other geometrical figure. It may be marked to resemble flagstones, or it may be given a rough textured surface to harmonize with a particular architectural motif. Unique effects may be obtained by the use of enamels and stains together. Inlay may be used to advantage, and designs worked out with terrazzo, art tile, and marble. The latter treatment is especially attractive in sunrooms, baths, and hallways.

A wide variety of floor coverings and finishes permits treatment of concrete residence floors to suit the tastes of practically all home owners. Illustrations shown here depict a few of the ways in which reinforced concrete residence floors can be surfaced.

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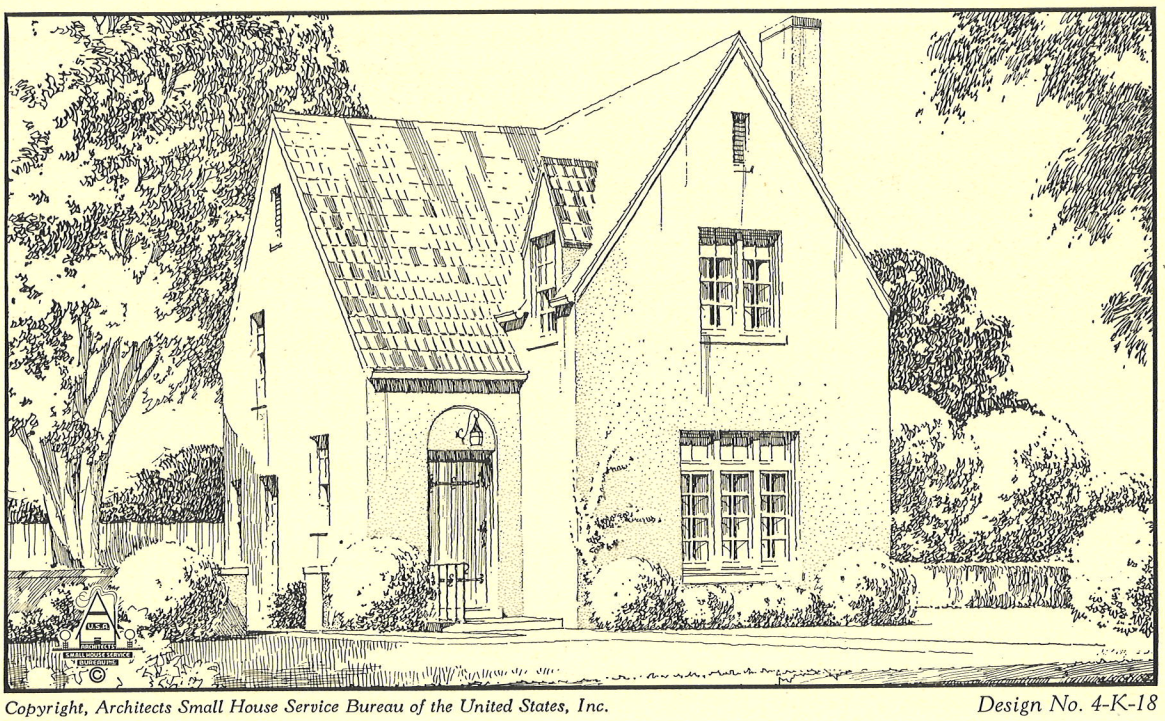

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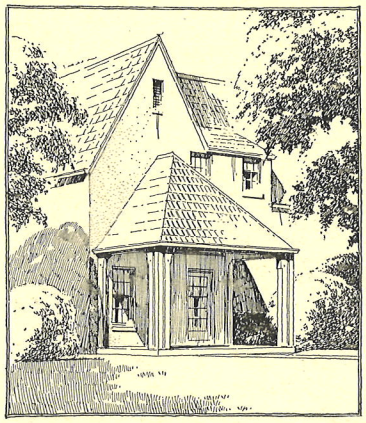
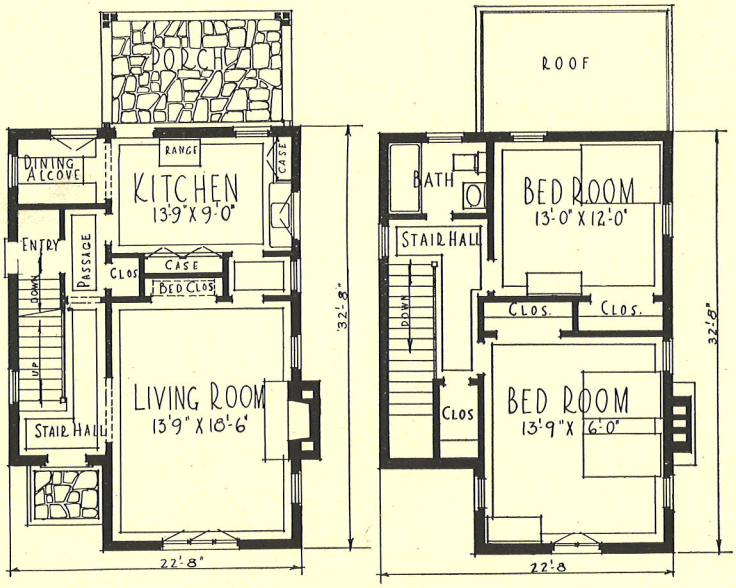
Design No. 4-K-18





THIS house is a model compact and efficient planning, everything being arranged to save time and labor. Being less than 23 feet wide it may be built on a thirty-foot city lot if necessary.

It is a four room house but there are actually three sleeping rooms available, two upstairs and one downstairs, the modern closet bed in the living room supplying the third.

A dining alcove off the kitchen provides plenty of space for the family and guests, eliminating the cost of a dining room and retaining useful space. In an emergency, a dining table may be set up in the living room.

The exterior of the house is well designed and pleasing. The arrangement of windows, wall and roof are the result of careful study, each part harmonizing with the other so as to retain the finest appearance with excellence of plan and simplicity of construction.

Construction: Walls of concrete masonry, exterior finish of portland cement stucco, concrete tile roof, first floor of reinforced concrete. *Size of lot:* 30 feet if necessary. *Facing:* North or west but plan may be reversed.

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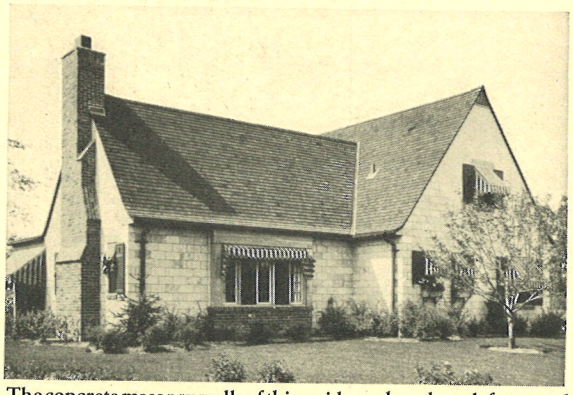
EXPOSED CONCRETE MASONRY



The concrete masonry walls of this residence have been left exposed with no treatment other than pointing the mortar joints.

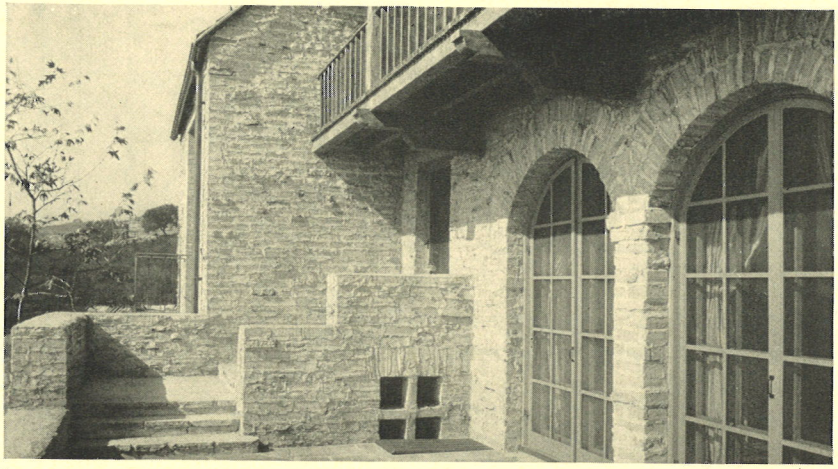
WALLS of exposed masonry, treated in any one of a number of artistic manners, are rapidly gaining in favor for residence construction and are an outgrowth of the desire for individuality and distinctiveness. Concrete building units afford almost limitless possibilities for attractive color and textural effects and have consequently become very popular for this type of treatment.

One of the most popular finishes and one which is employed to effect an appearance of ruggedness is achieved by laying up the units not too exactly, with varying numbers of them protruding slightly from the face of the wall in a seemingly random fashion. The use of more mortar than is actually necessary, commonly called protruding mortar joints is also employed to create a rough finish.

Unusually attractive surfaces for both exterior and interior walls are also produced by going over them with a thin brush coat of cement and water mixed to the consistency of paint, or by the use of special paint. With this treatment the masonry character of the wall is retained and joint markings remain faintly visible. The pleasing texture of the surface, suggesting sturdiness and permanence, is retained and enhanced by this application.

Where colored effects are desired, two methods of treatment are in common use. Mineral pigments may be incorporated in the wash coat, imparting a solid color to the wall surface, or acid stain such as developed for coloring concrete floors may be used. In the latter, a somewhat mottled appearance is produced which is very attractive. Excellent results have been obtained with both types and the colors are permanent and non-fading where recommended practice is followed in their application.

There is a growing tendency on the part of architects to design homes of the highest class leaving the concrete masonry exposed, not only on the exterior, but also on the interior walls. The reason for this lies in the fact that furniture and tapestry and other wall hangings often show to better advantage when placed before a rough plaster or masonry background. Hence, leading interior decorators are stressing more and more the rough plaster or masonry wall finish as an ideal background for artistic and attractive room furnishings.



An appearance of ruggedness and sturdiness has been obtained here by laying up the units not too exactly, and with mortar joints protruding slightly.

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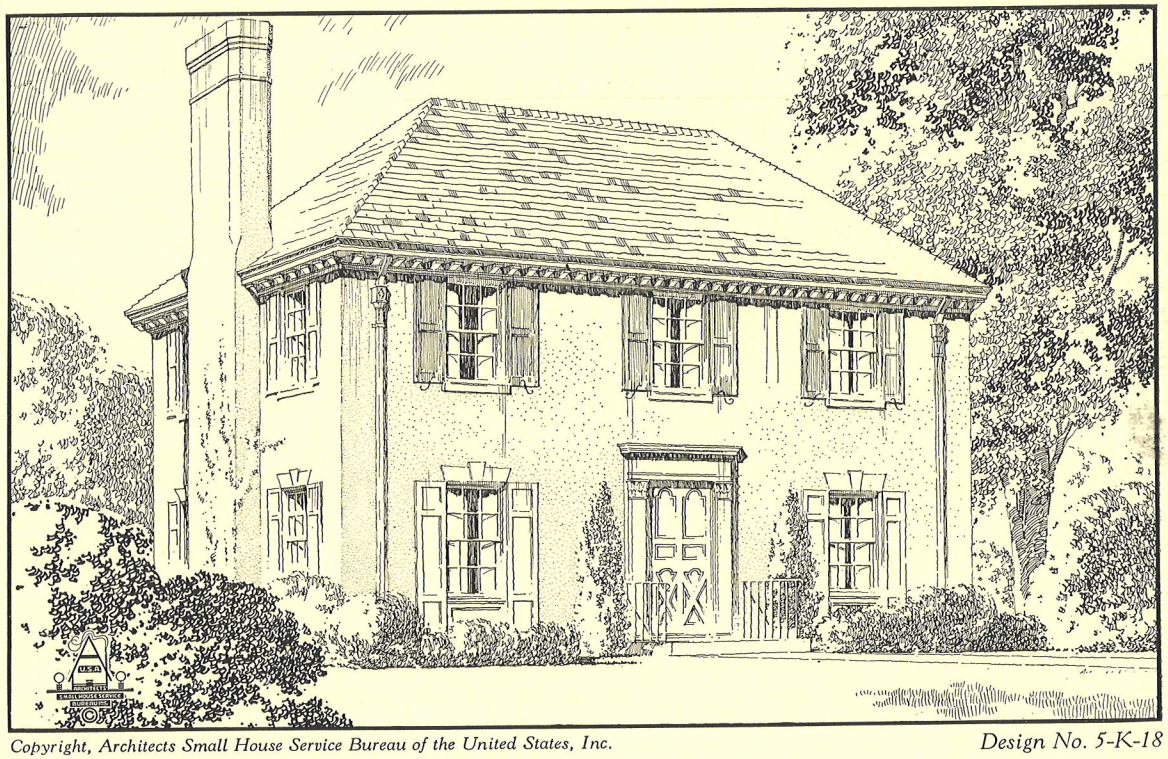

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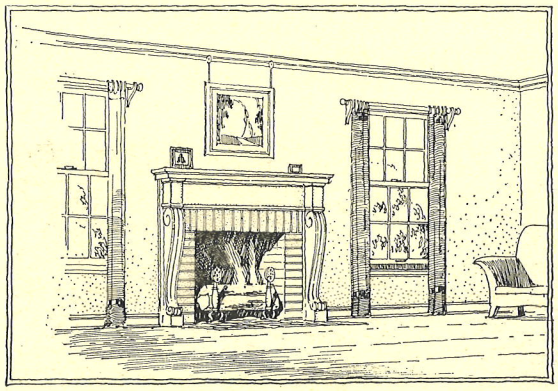
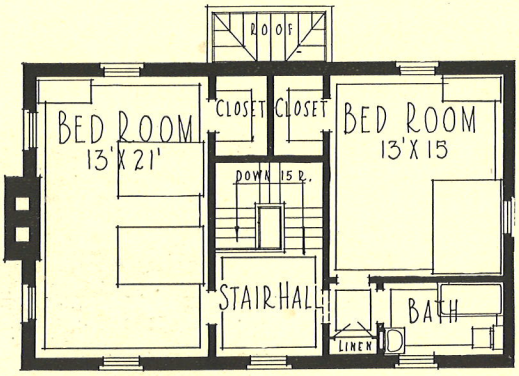
Design No. 5-K-18

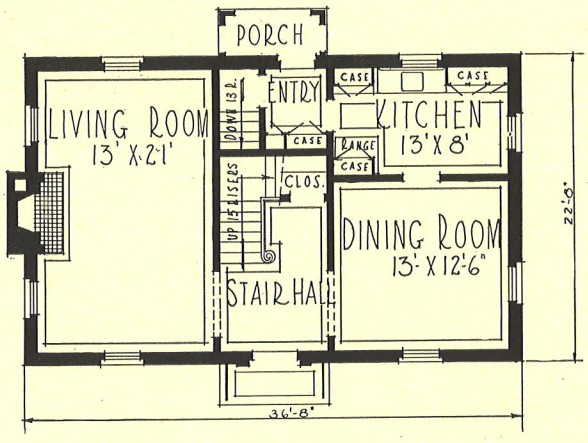




THE plan of this house, known as the central hallway type, from the point of utilization of space, economy of construction, and fine appearance is difficult to improve upon.

The living room, extending through the full depth of the house as it does in this design, provides a room of unusual size with unbroken wall areas. On the opposite side of the house the space is divided between a good-sized dining room and convenient kitchen. Two large bedrooms, and a bathroom are on the second floor.

Construction: Walls of concrete masonry, exterior finish, portland cement stucco, roof of cement asbestos shingles, first floor of reinforced concrete. *Size of lot:* 60 feet. *Facing:* East or south.



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DRIVEWAYS AND WALKS MAY BE ARTISTIC AS WELL AS USEFUL

A concrete driveway provides a year round passage direct from street to garage and is free from costly and troublesome maintenance.

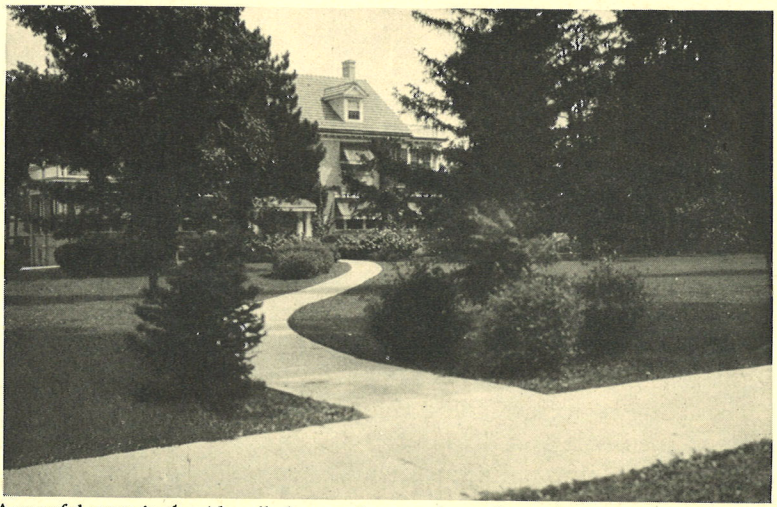
THERE is nothing, perhaps, that enhances the appearance of the home surroundings so much as neat, well placed concrete walks and driveways. From a utilitarian point of view it is much more pleasant to drive the car directly into the garage by way of the street entrance, than to reach it by a circuitous route through a narrow alley.

Like streets and highways, walks and driveways must be designed to meet the needs of those who use them. While it is generally necessary and desirable to have them follow the most direct route due to space limitations, pleasing effects can often be obtained by the use of graceful curves. It is folly to destroy a fine tree because it happens to be in line with the route of the walk or driveway; a graceful curve around the tree does not inconvenience anyone and it will materially add to the general beauty.

Often it is possible, by the use of color mixed with the concrete to give a pleasing tone to the surface and if desired, a decorative note may be obtained by marking off the surface of the walk or driveway into geometrical patterns to harmonize with the formal or informal treatment of the home grounds.

Whenever a walk is likely to be crossed by coal wagons or trucks, it should be built of a sufficient thickness to withstand the impact without cracking. The minimum thickness should be 6 inches, and if heavy loads are to be carried the sides of the pavement should be at least seven or eight inches deep.

The two most common types of concrete driveways are the pavement type, covering the entire drive area and recommended where it is to be subjected to hard service and the parallel strip type which is satisfactory for a driveway receiving only average use. The pavement type is usually made from 8 to 10 feet wide and 6 inches thick with the center given a 1-inch crown to insure drainage. The parallel strip type is usually built with runways 2½ feet wide and 6 inches thick. In this type of driveway the runways should be designed with curbs about 4 inches high along the outer edges, to prevent the car from running off and injuring the lawn.



A graceful curve in the sidewalk does not inconvenience those who use it, yet it enhances the appearance of the home grounds.

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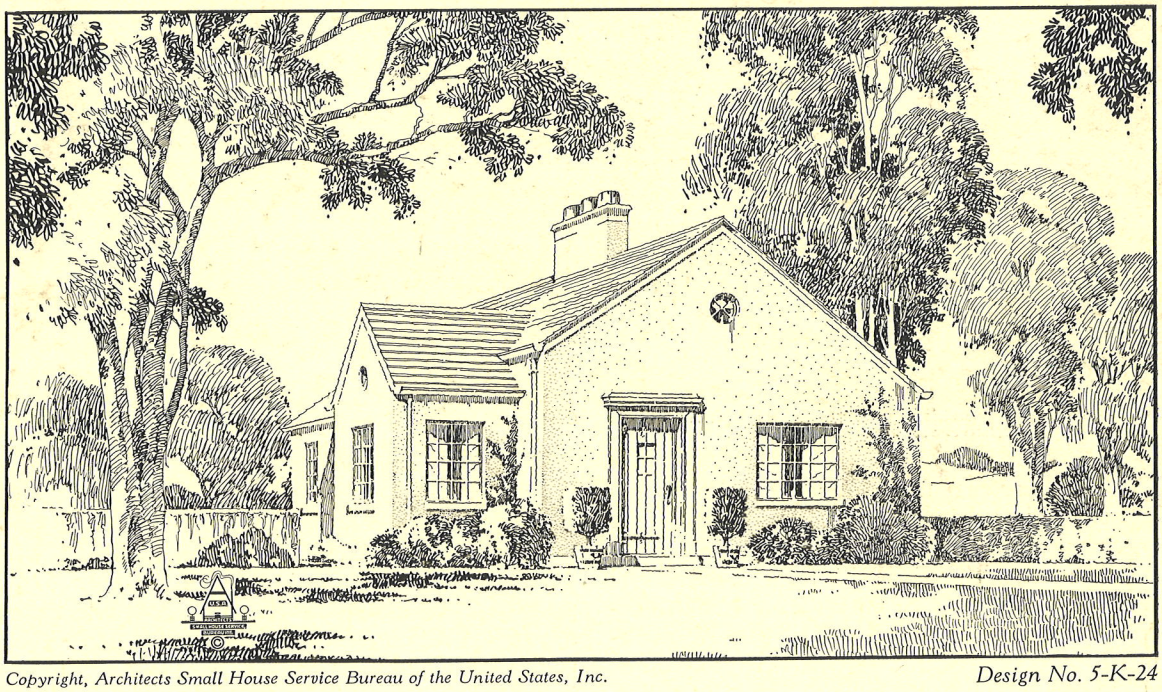

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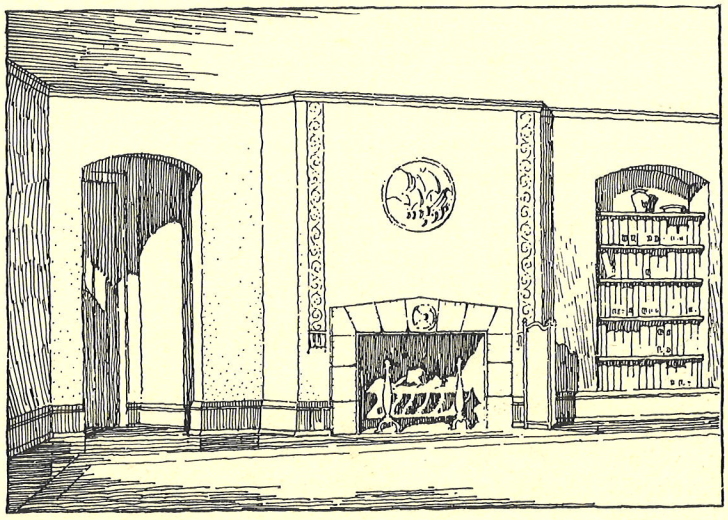

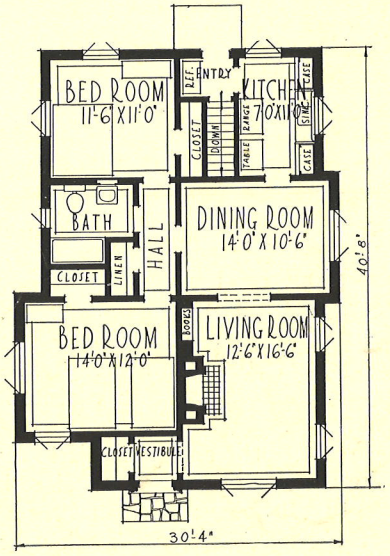

ORDINARY five-room bungalows that have become so common along our city streets find no counterpart in the architecture of this beautiful cottage. It is finely modeled and will prove a delight to any one who sees it. The plan is simple and straightforward and involves the least expense not only in building but also from the standpoint of the one who takes up the tasks of housekeeping.

Despite its smallness, there is an abundance of space in the house. The living room is exceptionally large and being separated from the dining room only by a plaster arch, has the appearance of a much larger room. The dining room is long and narrow, yet provides ample space for furniture and seating a number of people.

The housekeeper will be quick to note the excellent linen closet in the hallway, the coat closet in the vestibule, the built-in niche and shelves for books at the side of the cast stone fireplace as shown in the detail.

Construction: Walls of concrete masonry, exterior finish of portland cement stucco, roof of cement asbestos shingles, first floor of reinforced concrete. *Size of lot:* 40 feet. *Facing:* West or north.

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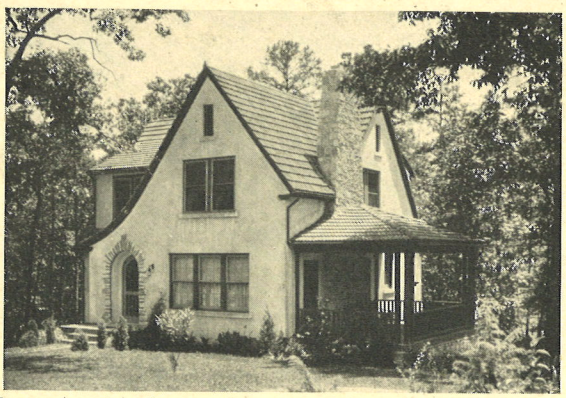
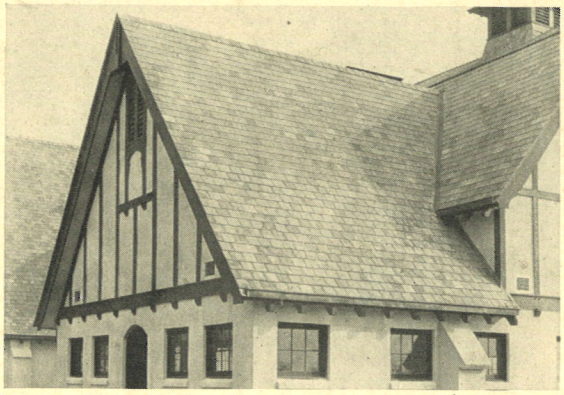
ATTRACTIVE, FIRESAFE ROOF COVERINGS



Concrete roofing tile provide a permanently attractive roof that is fire-resistive, durable, and waterproof.



Cement asbestos shingles—like concrete tile—are fire-resistive and attractive. Once a roof is covered with them it may be forgotten as far as future replacement is concerned.

RECENT reports from fire underwriters show that sparks on roofs are responsible for a large per cent of the residential fire losses in the United States. To reduce this hazard, municipal officials in many communities have enacted ordinances prohibiting combustible roofing materials in congested districts, and in many cases within entire city limits.

Concrete roofing tile or cement asbestos shingles meet all the requirements of fire safety and have the additional merits of being storm-safe, waterproof and attractive. Insurance companies acknowledge the fire-resistance of these roofing materials by giving them the best rate obtainable for roof coverings.

Concrete roofing tile are permanent, for just as concrete becomes stronger with age, so do concrete tile improve with each succeeding year. Concrete tile have time and again proven their ability to resist exposure in the most severe climates, making expensive and bothersome replacements and maintenance cost unnecessary.

Concrete tile are available in a variety of fast colors—red, green, gray, slate-brown, yellow and blue. Some manufacturers have developed pleasing combinations of colors or variations of the same color to be used on the same roof. A number of different styles are likewise offered, the most common designs being the French, Spanish, and English.

A feature that has contributed to the popularity of concrete tile is the ease with which they may be placed on the roof. They are true in shape and therefore lay perfectly. Side locks on each unit provide effective exclusion of weather. The tile weigh approximately 5½ pounds each, light enough to be supported on a roof of ordinary framing. They are generally produced in standard sizes of 9 3/16 inches by 14¾ inches, 150 tile being required to cover one hundred square feet.

Cement asbestos shingles are likewise made in a variety of shapes and are obtainable in standard colors and color blends. They are approximately 3/16 inches thick and average in weight about 435 pounds per hundred square feet for the American (rectangular) type and about 275 pounds per hundred square feet for the French or diagonal type. Once the roof is covered with them it may be forgotten so far as future replacement is concerned.

Another outstanding feature of concrete roofing tile is the ease with which they may be laid.

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A National Organization to Improve and Extend the Uses of Concrete

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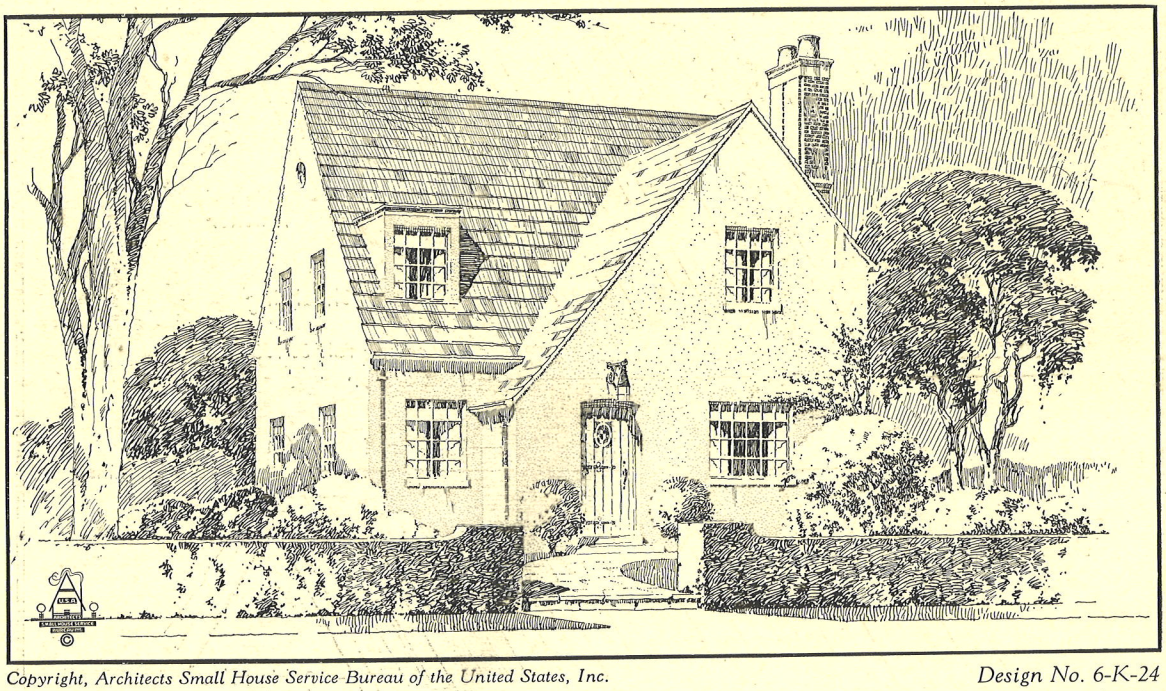

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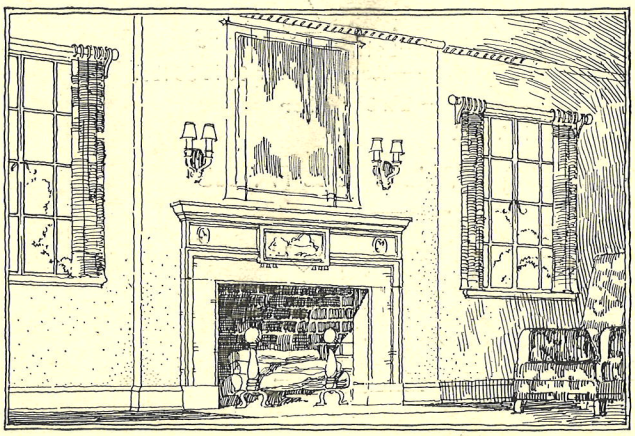
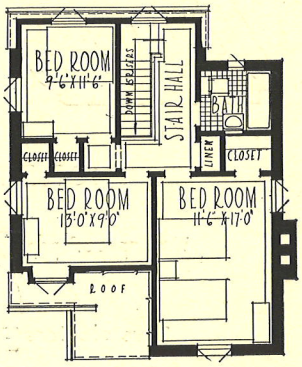
Design No. 6-K-24



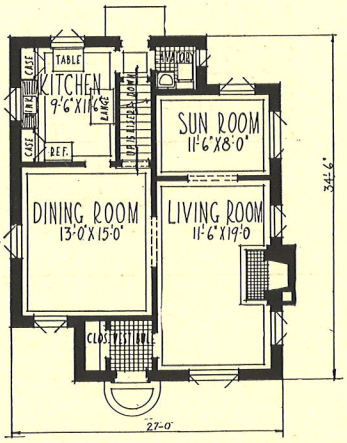


THIS attractive house has been designed particularly for a narrow building lot. The broad effect has been obtained by skillful management of roof planes to give the effect of wideness.

The location of the enclosed stairway is a desirable feature in this plan as it allows the living room and dining room to take up the full width of the house. The living room is unusually long, a feature which is further emphasized by the sun room in the rear also connected by a plaster arched doorway.

Upon the second floor are three airy bedrooms, one of them exceptionally large. All have plenty of closet space. The bathroom is designed to accommodate a recessed tub.

Construction: Walls of concrete masonry, exterior finish of portland cement stucco, roof of cement asbestos shingles, first floor of reinforced concrete. *Size of lot:* 35 to 40 feet. *Facing:* West or north.



This is one of a series of plans and home building studies prepared through cooperation with the Architects Small House Service Bureau to promote better design and construction in the small home. Complete working drawings and specifications for the house shown above may be secured at moderate cost from the Architects Small House Service Bureau at 7 West Madison Street, Chicago

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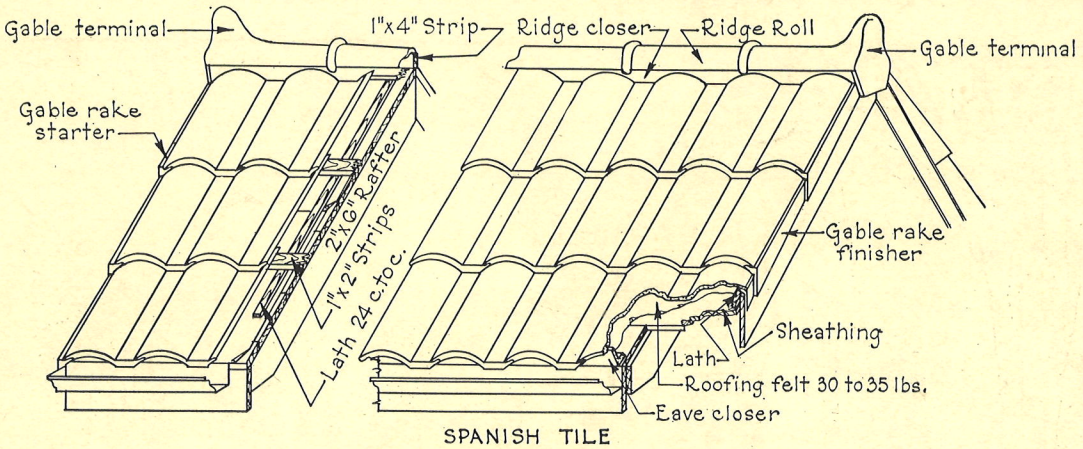
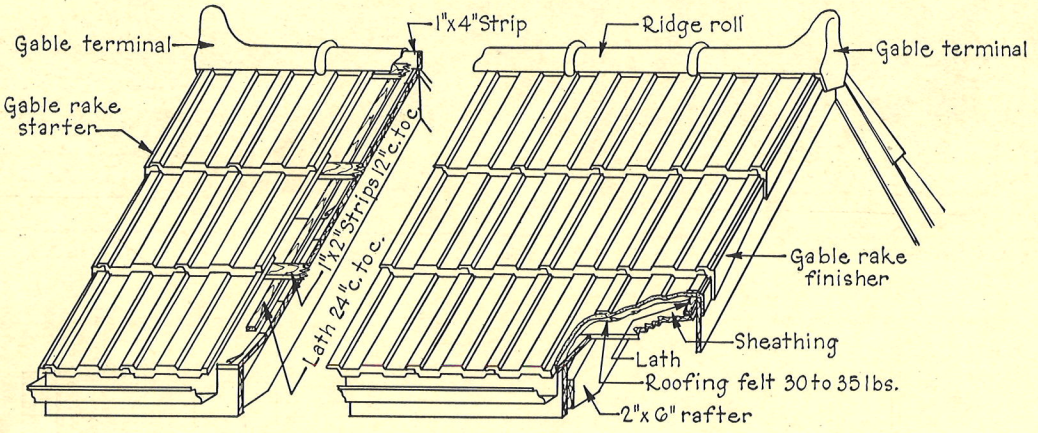
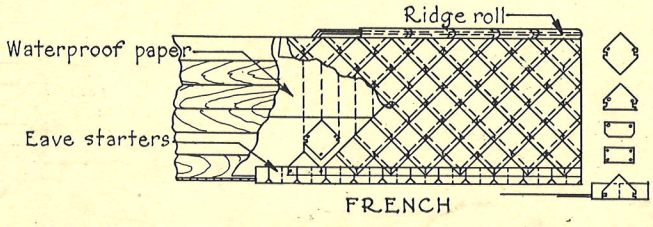


SPANISH TILE

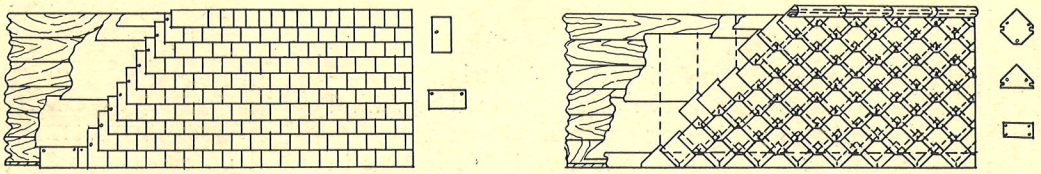


FRENCH TILE

CONCRETE ROOFING TILE DETAILS



FRENCH



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CEMENT ASBESTOS SHINGLE DETAILS

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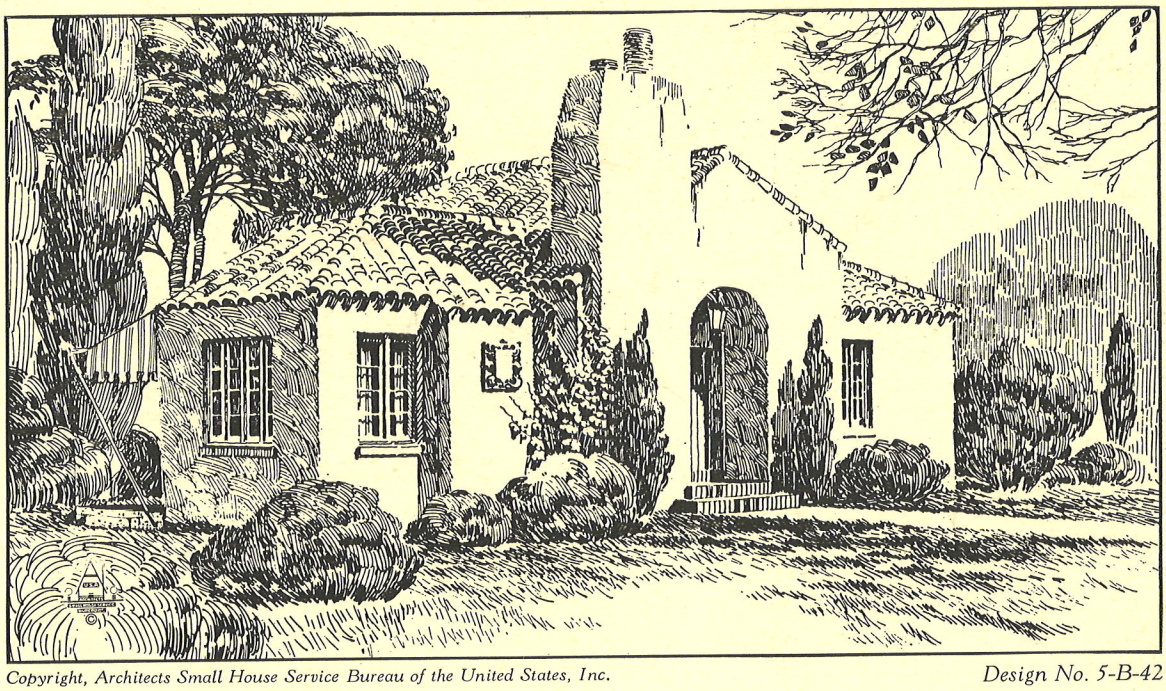

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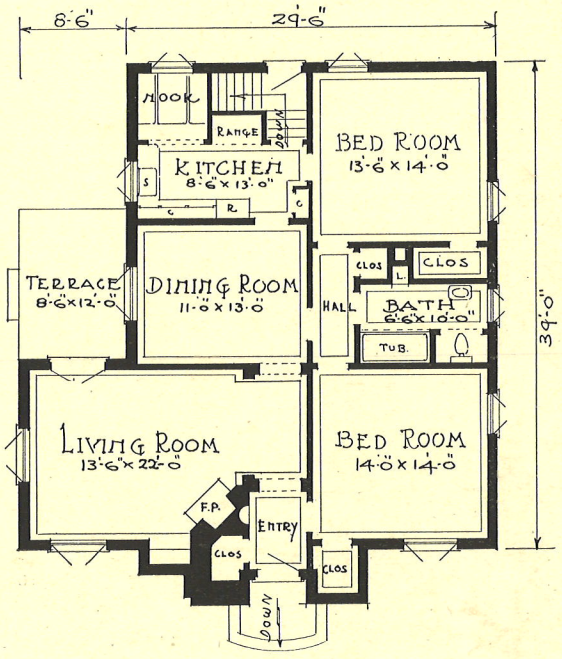
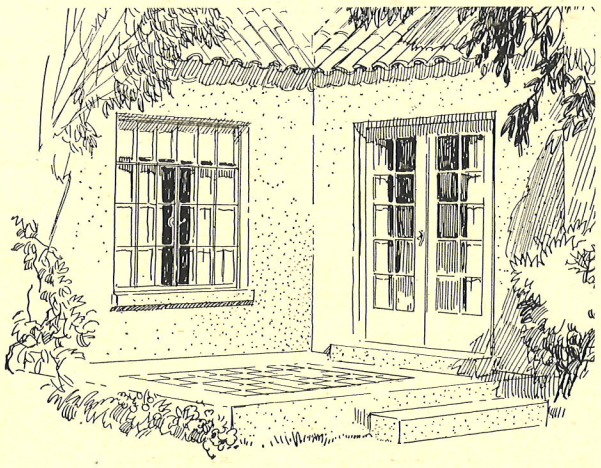
Design No. 5-B-42

THIS charming bungalow, done in the Spanish Mission manner, furnishes striking proof of the adaptability of this type of architecture to the small home. For home builders whose preference is for bungalows it should have a distinct appeal for all of the essential elements have been so carefully arranged that efficiency and comfort are evident at every turn.

While this house is very compact it is by no means crowded; rather it permits the utilization of the space to the fullest extent. In the case of the kitchen for instance no service has been sacrificed even though the room is small.

The living room, dining room, and bedrooms are all large and well ventilated. The bathroom, bedroom, and connecting hallway may be closed off from the rest of the house, a desirable feature in any home.





The terrace which opens off the dining and living rooms may be covered with a canopy, screened, or even made into a sun room.

Construction: Walls of concrete masonry, exterior finish of portland cement stucco, roof of concrete tile, first floor of reinforced concrete. *Size of lot:* 50 feet. *Facing:* East or south but plan may be reversed.

This is one of a series of plans and home building studies prepared through cooperation with the Architects Small House Service Bureau to promote better design and construction in the small home. Complete working drawings and specifications for the house shown above may be secured at moderate cost from the Architects Small House Service Bureau at 7 West Madison Street, Chicago

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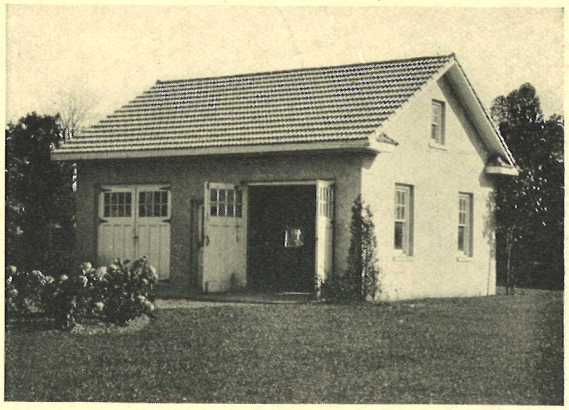
CONCRETE MASONRY GARAGES

IT is seldom that the modern house design does not include a garage of some type for today's home owner appreciates the advantages of having his car handy—especially in inclement weather. The amount of money invested in the average motor car justifies housing it in a garage that will keep it secure against fire and protected against the weather.

Concrete masonry has demonstrated its fitness and desirability for garage construction in thousands of cases and under a variety of conditions. Not only does the concrete masonry garage satisfy the requirements of fire safety and weather protection but it has the additional merit of ready adaptability to almost any architectural treatment.

Regardless of the location of the garage it usually appears in the general view of the house and should, therefore, harmonize with the home and its surroundings. Sharp contrast between the house and garage is to be avoided. To secure unity in appearance some predominating feature in the house design is often incorporated in the lines of the garage. With portland cement stucco—an artistic method of surfacing concrete masonry garages—an almost endless variety of colors and surface finishes is possible.

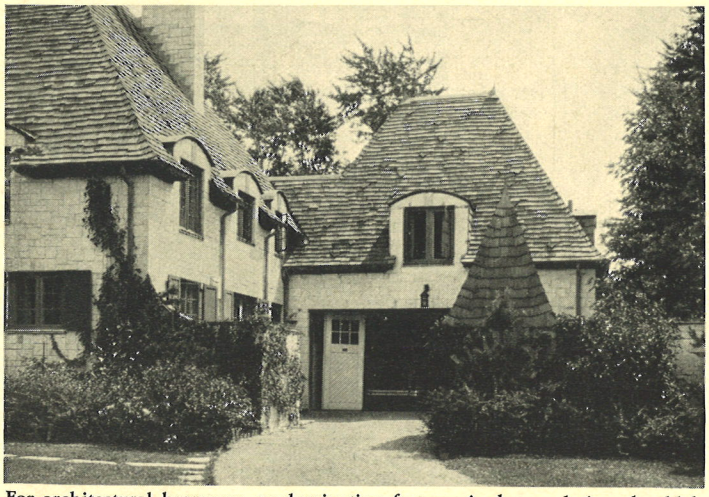
The desirability for convenience in the garage



This attractive two-car garage is permanent and firesafe. Walls are of concrete masonry covered with portland cement stucco; the roof is concrete tile.

location has caused the attached and semi-detached types to become quite popular. With either of these the firesafety offered by concrete masonry construction is not only an advantage but a necessity. In the attached type where the garage is made an integral part of the house, construction costs are often reduced due to the use of common walls and frequently a common roof.

Where building codes prohibit connecting doors between the house and garage a narrow covered passageway may be built between the house entry and garage. This is known as the semi-detached type.



For architectural harmony, predominating features in house design should be incorporated in the garage.

In case the lot slopes sharply toward the street, the garage may often be conveniently located on a lower level. A sleeping porch or sun parlor can frequently be placed on the garage roof. In such an arrangement it is important that the ceiling of the garage be fireproof. A reinforced concrete slab is the best means of insuring this. A cement plaster ceiling likewise provides an effective fire stop. If further information is desired, a copy of "The Home Garage of Concrete Masonry" describing garages and concrete driveways will be gladly sent on request.

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of CONCRETE FLOORS

IMMEDIATE interest is displayed by the prospective home buyer when you show him a house with a concrete floor. He feels that such a house *must* be well built. He likes the idea of greater safety from fire. He will, undoubtedly, be willing to pay more for a good house with trouble-proof concrete floors.

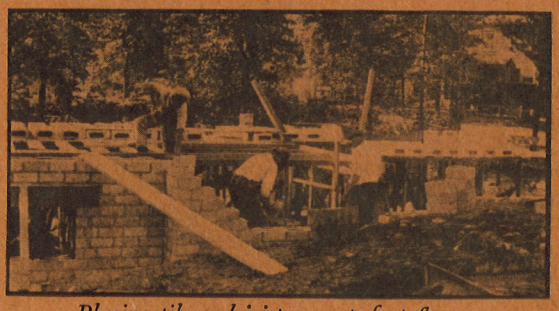
The finest apartment houses, hotels, and large homes have concrete floors. Recently, they have been perfected for use in small homes, too.

Concrete floors are rigid and strong, reducing vibration caused by heavy traffic on streets nearby, or by the romping of children within the house. They will help to prevent settlement of interior partitions, sagging doors, and plaster cracking. Concrete floors retain the warmth of daylight hours during cold nights, and remain cool on a hot summer day.

Many strong "selling points" exist for the house that has a concrete first floor. These have been attractively presented in our book "The Key to Fire-safe Homes." We would like to send you a copy —free. And to any persons you know who plan to build homes, we will gladly mail a copy if you send us their names.

Take advantage of this offer!

Laying sleepers over concrete first floor.



Placing tile and joist concrete first floor.

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